

Break

Only top cats need apply

Today is closing day for applications for the job of education officer of the Inner London Education Authority. The ads for the post—describing it as the top job in the country's largest education authority—have evidently attracted a good number of inquiries, though how many resulted in actual applications is not yet known.

Mrs Ina Chaplin, chairman of the authority's staff and general services sub-committee, and therefore a member of the sub-committee who will do the shortlisting and final interviewing, was seen chuckling in her office recently over some of the more curious applications. When asked, however, she was more circumspect. "There are a limited number of people who could do this job though a number of people may fancy themselves. We shall not doubt get the odd person who thinks they're the cats whiskers and who has no idea how to do the job."

The signs are this time that the field will be a fairly small one, mostly of people with experience of running large metropolitan authorities. The ILA's own deputy, Peter Newman, is a front runner, Manchester's Sir Dudley Elks is widely believed to be one of the favourites, and Chester's John Tomlinson, also mentioned by many in connexion with the job, is not unwelcome.

There are others, however, who might have been expected to apply who do not fit the challenge of the ILA as an exciting enough incentive to overcome its cost and domestic disruption of moving to London. That coupled with a feeling that in any case the challenge presented by the most problematic inner city of all, in fact, be a lost cause.

The committee, who will select the winner, will be made up of representatives of the authority's staff and general services sub-committee, and the opposition leader. They will be advised by Dr Eric Briant, the outgoing education officer, and Mr T. C. Swaffield, clerk to the ILA and director general of the GLC (not to be confused with Mr John Collins who is the ILA's clerk—shades of Monty Python).

On Monday of the following week, those on the shortlist will be interviewed by a slightly larger

committee consisting of the leader, the subcommittee chairman, the chief whip, two opposition members, a teacher member, and, for the first time on such a committee, a Labour backbencher elected by the Labour group—Mr Terrell Burgess—of the Higher Education Review, the National Association of Governors and Managers and the Diploma of Higher Education at North-East London Polytechnic.

On Tuesday, July 13, the momentous decision will be announced and London will know who is to sweep in at the end of the year when the Briant rethinks. This same meeting is also expected to consider Mr Robin Auld's report on William Tyndale.

Mr Auld's report is expected to comment scathingly upon the state of the primary schools in London and, coming up at the same meeting, will add to the widespread view that the new "KO London" will be unleashing a horrible mess.

Optimists—and indeed fans of Mr Newman—say, however, that the job will not be quite as daunting as it seems. Changes have been made in London in the last two years or so. Not only has the secondary school reorganisation gone through with surprisingly little bitterness (except in a few cases) but also, in the primary area, appointments and policy decisions have already been made which enable the authority to deal with the kind of defects the Auld report is likely to dwell on.

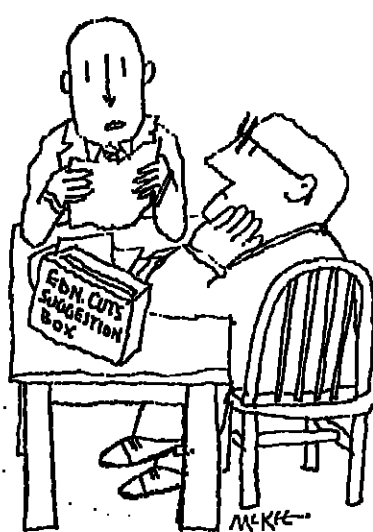
Floreat Flora

In their rush of commemorative stamps, the Post Office might do well to remember their most illustrious sub-postmistress, Flora Thompson, whose *Lark Rise to Candleford* has brought the remote rural poverty of the nineteenth century alive for today's urban readers, and so helped to save them from the worst excesses of pastoral nostalgia.

Flora Thompson was born in 1876. She started her post office career at the age of 14, when she went to Ealingford in North Oxfordshire, near her home hamlet of Juniper Hill to work for the indomitable Mrs Whitton, blacksmith and postmistress, immortalised in the novel as Miss Lane.

Happily it is a former sub-postmistress who has organised Flora Thompson's centenary exhibition, which is open to the public at the Juniper Hill Post Office. The exhibition, which is open to the public at the Juniper Hill Post Office, is a celebration of her life and work. It includes a display of her letters, a copy of the early reviews of *Lark Rise* and the subsequent novels, and a copy of the manuscript of *Lark Rise*, which she wrote in the novel as Miss Lane.

All these exhibits are set among the relics of the labouring country side of Flora's childhood. Wide-



"This one just says 'Don't panic'."

thumbed sheep shears and hay knives hung on the walls, and a large oil of traditional gypsy flowers made of wood-shavings was prepared by a man whose Roman forebears travelled the Midlands and may well have been known to the children of Juniper Hill.

Margaret Lane, whose biographical essay on Flora Thompson published in *The Cornhill Magazine* in 1957 and now reissued by John Murray at 90p, formally opened the exhibition on May 21, the anniversary of Flora's death. It was a good party for her. Sir Hugh Casson, who presented the BBC television programme on Juniper Hill was there; so was Geoffrey Cambridge, her friend and publisher; and most fittingly, Mr Mitchell and Mr Cooke, the two Selborne postmen.

Settling in

Should Britain begin to consider itself a country of immigration like Australia or the United States? The Institute of Contemporary Arts have been looking into the way that although admitting to a tradition of providing political and religious refuge, we think of settlers as people who went from Britain to the colonies or to the Americas. Yet there has long been a steady flow of immigrants into Britain, from the Romans to the present day.

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Speaking at the second discussion, Roger Moching, of the International Labour Organisation, traced the development of immigration policy in Western Europe and emphasised its economic, rather than social or political, origins. Sparked off by the need for cheap labour, government policies evolved

which were based on a laissez-faire economy. They resulted in a fluctuating intake of foreigners and a general reluctance to consider seriously the volume, composition and long-term implications of a growing immigrant population. The demand was for workers, not their descendants. Family reunion was discouraged, and social and political rights were slow to follow the right to work. In other words, governments put the economic cart before the social-political horse.

By 1973 immigration in Europe had reached its peak and a large foreign population was firmly settled. This, plus rising unemployment due to the oil crisis and technological advances in industry, caused a reassessment. Governments took positive steps to reduce the flow of immigrants, and to assimilate the existing population by more realistic housing and education and by easing naturalization formalities.

Although the reduction in foreign labour is likely to continue, our responsibilities do not diminish. The Remarque Trust hopes to promote a greater awareness of the problems encountered by Britain's settlers. As an adoptive country, we must assimilate immigrants into our social structure while respecting the different cultural backgrounds. Fasbinder's film *East of the Soul* followed the discussion. A quietly effective statement about the isolation of migrant workers, it was in marked contrast to the more utopian words on immigration heard in Parliament the preceding day.

As they like it

Immigrants and theatrical immigrants packed the former BBC Riverside Studios on Sunday evening for Peter Gill's superb production of *As You Like It*. Among the professionals in the audience were Michael McDowell, Nick Wright, Bill Brydon, Robert Kidd, Raymond Baxter, Roger Norrington (director of Kent Opera), Sir Hugh Casson (executive general of the Arts Council) and casting directors from the National and Royal Court Theatres. The level of excitement and enthusiasm was something like a West End first night.

The cast, headed by June Lapwood, were almost entirely the same as in last year's Nottingham Playhouse production. Despite rehearsal difficulties, they presented the delicate comedy which last year moved Cleeve to say "it was the best play I saw during the festival." (Mr Gill's staging... seemed to be an Arcadian testimony to youth... The charm of the production was quite simply in its insistence on the text and its feeling for the mood and tempo of the play. The lightness and humour were enhanced by elegant, joyful music by George Fenton and touches like the many children who sang and skipped and played leapfrog, and the puppet

success. But it is very necessary as the following shows. It was played at an international tournament at Szolnik this year. White: Westerninen; Black: Dely, Sicilian Defence.

Position after Black's 15th move.



There is a certain type of player whom we all know him—who delights in wandering from the straightforward and usual path and produces strange moves at the very start of the game. He flouts the book because it is the book and tries to ensure that his moves are not to be found in any textbook. He is to be found in every class of play and at every level of strength, ranging from master to club player or even lower. Usually a player with a gift for confusion tactics, he scores many a point success but for the most part comes unstuck when he meets players in a higher range of events. He should not play against the unusual? Should one ignore it and play on solidly in the hope that he will dash himself to pieces against a solid and well-built wall? Or should one take note and even imitate his bewildering tactics? The answer lies somewhere between these two strategies. He is not to be ignored nor imitated. With a firm hand one should keep to what might be termed the eternal virtues. Tumbling though it might be to shame your opponent by imitating his methods, one should refrain from exercising a moral judgment and concentrate on the game in question. This is not an easy master-method to adopt with any hope of suc-

(a) The normal line here is P-Q4; the next move needs careful hand-

show given in the interval by the Carpenter.

As You Like It was not the experimental weekend at Riverside for which Peter Gill's production of the play was the main event. The studies are now the property of the Riverside Council, and the use as an arts centre, and the artistic policy. The weekend was planned to show the building's demonstration of quality in design and construction, and to attract about 1,000 people to the various events.

The Joy Consort of music, music maintained a high standard on Friday evening, in comparison with some builders who were building a wall. Among many good performances William Louth's company, the jazz concert given by the London Contemporary Dance Theatre were especially popular. Events by and for children were down well, too. The Children's Music Group and the toppler Wren's School, still in the did well, while Patrick Procter's "Paint Hamme's biggest picture" event attracted scores of children who swarmed over scaffolding with this of paint to fill in a special of staid glass or mosaic pattern.

Local reaction seems to have been excellent: the place was crowded for the three days with people of all ages. "I've never enjoyed a weekend so much in my life" exclaimed a lady and an effie, young gentleman. The potential of the studios as a longer he in dispute and as a for television they could be used out commercially for a revenue.

But now the place has to go for a few months of good work. Decisions and decisions. It would be a shame the stimulation of the experience weekend and the enthusiasm of people who are giving their in the project were wasted. The studios allowed to sink into the side oblivion.

Mr Mulley has not wasted any time stepping in to clear up the Tameside mess. He has issued his direction under section 68 of the 1944 Education Act, very rejecting as unreasonable the attempt by the newly-elected majority in the metropolitan council to stop the comprehensive organization introduced by their predecessors.

His action has to be considered from the legal and the political angle. It seems no reason to doubt the legal validity of what he has now done. The Education Act quite clearly envisages the possibility of a dispute between the Secretary of State and a local authority, and provides a specific procedure by which he can direct the local authority to do his "duty". Tameside Council may on Monday to confirm their education committee's decision, to test the Secretary's action in the High Court. But grounds for such a challenge do not seem to be at all strong.

The law empowers the Minister to act "as he sees fit" that the authority acted unreasonably—a deliberately active form of words intended to let the Minister, and not be taken over by the court. It would be surprising if Mr Mulley had acted unreasonably by failing to set about deter-

mining the issue properly or because there were no grounds on which a reasonable Minister could come to the conclusion he reached.

Tameside might try to convince the court that the Minister's action had been dictated by purely political motives, but as Mr David Spiers, the Tameside chief executive, himself pointed out after the meeting of the education committee, there are clearly also educational grounds on which such a judgment could reasonably have been made; at the very least, the educational circumstances do not point

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Harry Columbus

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Tameside row: defiant council may go to High Court

Philip Venning

Tameside Council may take the Education Secretary to court over his plan to keep grammar schools. They will decide on Monday whether to challenge in the High Court Mr Fred Mulley's intervention under section 68 of the Education Act.

Last Friday Mr Mulley ordered the council to abandon their plan to close grammar schools and return to the original scheme for going comprehensive in September. But on Monday a meeting of Tameside Education Committee decided by 19 to 12 to challenge his ruling.

Now goes before a specially convened meeting of the full council on Monday to be ratified. Since 1944 section 68 has been used on a matter of general principle. The most recent case was when Mrs Margaret Thatcher, Education Secretary, intervened to stop the closure of grammar schools in Surrey. It has also been used about 30 times in the last six years in individual cases, only to do with entry to particular schools. This is the first time it has been seriously considered by the Education Secretary to

the council, may be on the other hand. Legal experts at the Department of Education and Science are wondering whether to allow up the directive with an order under section 68 of the Education Act. This gives the Education Secretary legal power to enforce it.

Volunteers in Tameside are still giving the 1,000 applications they called for the 240 extra gram-

mar school places created by their plan. But the moment they start selecting children for these places the DES are likely to seek a writ under section 99.

Mr Mulley decided to intervene after his meeting with council members on Wednesday last week. Teachers' unions, some MPs, and parents had been pressing him to do so for some weeks.

In his letter to the council, the contents of which he revealed to Parliament, Mr Mulley said that after careful consideration he was satisfied they were proposing to act unreasonably.

"A change of plan at this late stage of the year, designed to come into effect less than three months later, must in my opinion give rise to considerable difficulties."

Parents were in a dilemma. They could adhere to the secondary school allocations which they might regard as being no longer appropriate or they could submit their children to an improvised selection procedure, carried out in circumstances which would create more uncertainty.

It was clear that an abnormally high proportion of pupils might have to be reallocated to different schools during, or at the end of, the next school year. This would add even more uncertainty.

"In addition, the change of plan at this time in the educational year threatens to give rise to practical difficulties in relation to the appointments of staff already made



Sign language: student teachers protesting at the jobs shortage. Their message to the Government was summed up in a street sign during their demonstration in London this week. "30,000 in end-of-term job hunt"—page 5

Curb on vandals

Giving children more places in which to meet and play on council housing estates and a say in running them would greatly reduce vandalism, says a report published this week. Frances Staden reports

Features, pages 17-19

W. K. Richmond on elitism and egalitarianism in Russian schools; Margaret Spencer on reading resources in the 1950s; Jacky Gillot on boarding school days in the 1950s.

Books, pages 21-25

Asa Briggs on the history of education; Geoffrey Brereton on *The Women's Troubadours*; sociology, history, environment, third world.

Resources, pages 26-28

Carolyn O'Grady and Frances Barrer on *After Naves*; Deborah Thom on the Middle Ages; Jim Bromwich on twentieth-century nationalism; Gayle Manwaring on a new resources centre at Glasgow University.

39-50

Extra: Secondary science

Twelve pages of textbooks, library books and books for school societies.

Extra: secondary books

science.

continued on page 3

Mr Mulley reaches for the big stick

Fred Mulley has not wasted any time stepping in to clear up the Tameside mess. He has issued his direction under section 68 of the 1944 Education Act, very rejecting as unreasonable the attempt by the newly-elected majority in the metropolitan council to stop the comprehensive organization introduced by their predecessors.

His action has to be considered from the legal and the political angle. It seems no reason to doubt the legal validity of what he has now done. The Education Act quite clearly envisages the possibility of a dispute between the Secretary of State and a local authority, and provides a specific procedure by which he can direct the local authority to do his "duty". Tameside Council may on Monday to confirm their education committee's decision, to test the Secretary's action in the High Court. But grounds for such a challenge do not seem to be at all strong.

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chers' organizations. The Conservatives are eager to present the issue as one between the elected representatives of the people and a single professional group, the teachers, who, they allege, are seeking to usurp power over education policy which is properly vested in the council.

Many people will think that Mr Mulley had to intervene, that his reserve powers under section 68 exist for just such a circumstance as this, and that there is nothing inherently undemocratic about providing a legal mechanism for resolving a clash between a local council and a minister responsible to Parliament. In the background there is Mr Mulley's Bill now in the last stages of its passage through the Commons. The Bill itself is an unnecessary measure, and by tempting the Conservatives to promise its repeal, may serve to perpetuate the uncertainty and the delaying tactics in Conservative areas, of which the Tameside gesture is a part. But if neither of the major parties in Tameside, or at Westminster, come out of the present wrangling with much credit, somebody has to safeguard the interests of the schools, and this Mr Mulley is now trying to do.

No comment

"Maternity grant: £10.00 for each baby born—Two claims if both husband and wife are contributors—from a health insurance note distributed by the Wirral Borough Council.



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Out of control?

Nobody disputes that the system of local government finances is creaking badly at the joints. It did not need the gargantuan—and so far uncosted—efforts of the Layfield Committee to tell us that, but the point has just been made home from two different directions. Peter Shore at the Department of the Environment has been weighing into the Labour local government barons for their overspending. And a county council treasurer, Mr. Fieldhouse, has shown how easy it is to overspend and put the responsibility mostly, though not entirely, on central government (page 7).

When two sides to an argument start blaming the other, the chances are that both are right. Mr. Shore starts off with one advantage; he is not known, as Mr. Crosland was known to have difficulty in disguising his contempt for the local government people with whom his job and his politics obliged him to mix. But it is clear that Mr. Shore did not mislead his words. Labour councils have a habit of overspending (in fact they often claim credit for being big spenders) and it is clear that central government cannot do its job if local authorities keep upping the ante. On the other hand, many of the authorities which appear to have been singled out are those which have particularly severe housing difficulties. And housing is an area where decisions are taken at least as much by Whitehall as by the town halls.

On the local authority side, Mr. Fieldhouse puts some of the blame on local government itself—adequate accounting techniques and a flurry of new appointments and re-organization are instances. But the main responsibility, in his opinion, lies with the central system of control. Local spending by central government. Capital spending is controlled through loan sanctions; revenue

spending through the annual grant system. The two are not related. The only time capital and revenue are brought together is in the annual Public Expenditure White Paper. But as Mr. Fieldhouse points out, it is perfectly possible for local authorities to spend less than the amount projected in the White Paper, but still run the risk of overspending on their revenue account. This is because of the debt charges, staff salaries and maintenance costs that every new building involves. But these are not taken into account when loan sanctions for capital projects are approved.

Clearly, somebody, some day, is going to have to take hold of the problem with both hands and do something about it. Reactions so far to Layfield suggest that the day is not yet at hand. In the meantime, local authorities will go on in centres of overspending while standards of service are falling. Even Mr. Fieldhouse, albeit grudgingly, admits that the standards of the education service must have suffered in the last round of cuts, even though he makes the usual qualifications about the difficulty of proper measurement.

So far, local authorities have, on the whole, saved existing jobs—though not, as this week's student demonstrations testify, future ones. But, as Mr. Fieldhouse points out, demands for local services are bound to increase—it is part of the "rising standards of civilized living". But even to express the pressure of rising expectations in this way is to point up the need to relate it to some feasible rate of economic growth and some strategy for periods like the present when the economy has stagnated. Some way will have to be found of increasing the efficiency of local authority manpower—including teachers—because the pressure to keep costs down shows no signs of going away.

The safety catch

The incursion of factory inspectors into educational institutions since the Health and Safety at Work Act came into force a year ago can only mean trouble for the education service (page 6).

It was high time that exhortations to greater safety precautions were backed with real sanctions. No one would argue that it was right for workshops, kitchens and laboratories in schools to be exempted from laws generally accepted elsewhere as essential for personal protection. That accidents are apparently remarkably rare in educational establishments is in itself not sufficient reason for allowing lower standards.

The misfortune is in the timing. Had action been taken to bring the regulations for educational institutions into line 20 years ago, as it should have been, new buildings put up and equipped in the education boom years might reasonably have been expected to have conformed to the required standards. What has, however, happened is that the factory inspectors have arrived upon the scene at a time when building programmes end, a standstill and minor works programmes have dwindled to the point where they are barely adequate to cover urgent repairs.

Staying on in Scotland

The Raising of the School Leaving Age in Scotland, a report by H.M. Inspectors of Schools in Scotland (page 8) offers an account of a change imposed on schools which were not ready for it and which resisted and resented it.

It was, of course, the Inspectorate who were largely responsible for proposing new guidelines, and an entire new structure of promotion posts in Scottish schools: the creation of these led to an extensive moving around of staff, mostly into new kinds of jobs. This general instability, added to a general resistance in Scotland to the idea of RSLA, created a distinctive

unrest in the teaching profession where which was apparent late in 1974 while Houghton was sitting.

Many Scots would argue that the leaving age would never have been raised in Scotland if there had been any kind of independence of decision. Government proposals for a Scottish Assembly suggest that the leaving age is the kind of measure that Scotland would be allowed to determine. In Edinburgh, whether the Scots would seriously want devolution to be interpreted as the right to have a lower school leaving age than the rest of Europe is another question.

What examiners say ...



The examiners stress, however, in future the word "compare" should be used in the similar, the differences.

... too many candidates perform below their potential because, though persuaded to absorb and reproduce information, they appear to have had little training in thinking about it, or in distinguishing, in a given context, between what is important and what is not. To train candidates to answer examination questions is not a form of "cramming", but an exercise in intellectual discipline.

... candidates must be taught the meaning of key question words such as *analyse, discuss, compare* and how these instructions differ from requests for description.

(Geography, A level)

... candidates equip themselves with a minimum of knowledge and seem desperate to present it whatever the question. Even those better informed look for a familiar name or a familiar event to trigger off an avalanche of unfocused material. As one examiner put it, "Pavlov's dog rampages through the ranks of syllabus A with all the frightening ferocity of the hound of the Baskervilles".

(History syllabus A, O level)

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... from the latest triennial examiner's report of the London GCE Board 1973-1975.

It was not uncommon for a candidate to fail this paper because he had failed to answer a single question as set, although it was obvious that he knew his subject and deserved to pass.

(Zoology, A level)

Questions are not designed to act as triggers, releasing a flood of information on any particular topic. If this were required, the question would begin "Write what you know about ...". Or "Write an essay about ..." or something of the kind.

(Biology, O level)

Barking up the wrong tree?

From the quotations above it is clear that examiners are not doing what examiners want. The two sides are not communicating. With the exam season upon us, it is timely to ask who is to blame? There are three parties involved—the examiners, the candidates and their teachers.

The reference to Pavlov's dog, though amusing, conveys a depressing view of exams as the most predictable and self-fulfilling of events, a view which probably accords all too well with experience. In these circumstances it would not be surprising if examiners should come to believe that it hardly matters how questions are phrased, that tinkering with the form and wording of questions is about as effective as shifting the dock-chairs on the Titanic.

Not everyone shares this view, of course, and in recent years much attention has been given to sharpening up old-style questions of the "discuss" or "describe" variety but clearly the feeling persists, a feeling that the similarity of the 1969 and 1975 reports only crystallizes, that these efforts are not having much effect. Whether we should expect them to when weighed against the problems created by the time limits imposed on candidates is another matter.

However generous the time given might seem, most candidates feel rushed, especially at the beginning. This is an inevitable consequence of working against the clock when the stakes are high and it probably does not matter how much practice a teacher has given his students in this kind of writing. Tension and the task in front of them combine to drive out of many candidates' heads any notions they might have had about taking their time and planning answers.

On top of this there are the group pressures induced by other candidates. It is a brave spirit who will sit back and calmly lay out his answers while those around him are scribbling away furiously.

It is hard to see how exams can produce anything other than exam nerves. As John Dixon of the English 16-19 project has written: "The answer sketches I have seen can be of little use to the candidate, being usually a string of names or events or clichés, executed with a little thought and as much ritual as the answer itself."

Which is Pavlov and which is the dog? Robert Wood of London University school examinations department questions the way exams are set

ledge of audience, are ignored. But the importance of knowing your audience can hardly be exaggerated, as the Writing across the Curriculum project has emphasized in the recent reports. James Britton and his colleagues.

If candidates were to write answers at leisure, with access to reference material and opportunity for clarification, would matters improve? The experience of the JMB experimental O level English language scheme, where students submit a number of assignments written over a period of time, is that students can produce markedly superior work. But this would not necessarily happen in other subjects.

Time may not press but if it is imperative to understand the meaning of key words then, unless they are taught the necessary distinctions, I do not see how students can be expected to come any nearer the examiners' expectations. Being able to understand, quite untaught, the distinction between "analyse" and "assess" comes naturally. I suggest, to few students. Going over to some form of continuous assessment is not a universal panacea. The problem of eliciting good writing remains.

Planning an answer, for instance, is an intellectual activity which has to be taught to most students. The answer sketches I have seen can be of little use to the candidate, being usually a string of names or events or clichés, executed with a little thought and as much ritual as the answer itself.

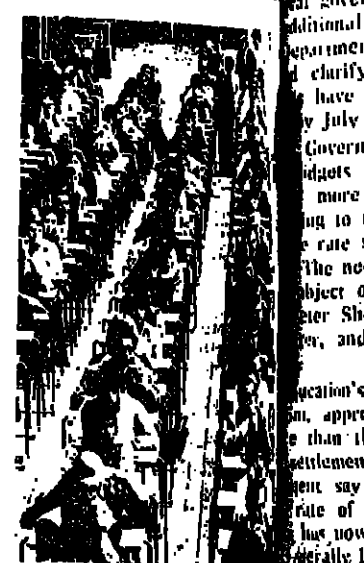
Writing to express ideas requires redrafting. As Peter Wilson has observed, one learns what one wants to say as one goes along, and this article is no exception. Yet in an exam there is barely time to rewrite, much less polish. In these circumstances their facility in writing inevitably works to advantage. If examiners are inclined to com-

Authorities hold out little hope of saving £400m

The point of most questions in such words and phrases far ... "What are you going to do about it?" means by which candidates miss the implications of the question.

(English Literature, A level)

... about the they exam



... from 1969 subjects

authorities are finding it difficult to cut the £1.5m excess they had to education for the next year. There also seem to be some of them making up in next year's overspending.

... about the they exam

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New move on retraining

Mr. Mulley, the Education Secretary, is now considering a plan to use money from out of the education budget, possibly from the Manpower Services Commission, to retrain some of this year's college leavers to teach in schools.

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Time to sack the ineffective, ILEA are told

The time may have come in fact, had teachers, says a confidential report by senior ILEA officers on staffing in London secondary schools.

The report, which was due to be discussed by representatives of the teachers' unions yesterday, says that falling school rolls will make it necessary to reduce the teaching force by 1,100 by 1980. This will save the ILEA more than £3m.

The report is based on the assumption that the present policy of maintaining but not improving staffing standards will continue for the next four years. By 1980, it says, there will be 18,000 fewer pupils in ILEA schools. Teacher numbers should, therefore, be cut by 171 next year, by a further 214 in 1978, by 324 in 1979 and 428 in 1980.

The difficulty of maintaining a balanced curriculum in comprehensive schools while reducing the teaching force is discussed. And the report questions "whether the system can afford, in times of falling rolls, to carry ineffective teachers, however few."

It also questions the "early promotion, in former times of shortage, of young staff, some of whom are less good than staff now available."

A spokesman for the ILEA said this week that they expected to lose their 1,100 surplus teachers through natural wastage and redeployment. But it is clear that some of the authority's officers see in the drop in pupil population an opportunity to weed out bad teachers.

The report acknowledges that shortage subject teachers who resign will have to be replaced despite the overall aim of cutting the teaching force. The ILEA officers have, therefore, asked for money to be set aside so that they can when necessary appoint extra teachers in subjects like mathematics.

A spokesman for the National Union of Teachers said the report's concern with "ineffective teachers" could be discounted. "This is just a bee in the bonnet of a particular ILEA officer."

College overruled in decision on university merger

Coverity education committee voted by 13 to three this week to recommend a merger between Coventry College of Education and Lanchester Polytechnic. The college itself wants a merger with Warwick University.

A large majority for the polytechnic was caused by a Conservative decision to abstain until the main council meet later this month. The final decision on the college's future will be taken by city council where Labour have a majority of 20.

The college governors met last Friday and voted by 15 to six to merge with Warwick. The only group in favour of a polytechnic merger were the six Labour councillors on the governing body.

Those who voted against included representatives from Warwickshire and Solihull local education authorities, college lecturers, representatives of teachers, students and local churches. Mr. Gordon Lawrence, acting principal of the college, also spoke in favour of the university merger, but did not vote.

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Gifted pupils hide their talents in primary schools

by Tim Devlin
Education Correspondent of "The Times"

Gifted children with exceptionally high IQs do less well at primary schools than ordinary bright children, according to Mrs. Erica Painter, a lecturer at Mid-Herts College of Further Education, Welwyn Garden City.

She tested a group of 73 gifted children, average IQ 160 (Stanford-Binet), in standard National Foundation for Educational Research tests for written English and mathematics. On average the children performed about two and a half years behind their capabilities in both subjects. In each case the average mental age according to the IQ assessment was about 14.

Mrs. Painter compared these results with the performances of a control group of 64 children, matched as closely as possible for age, sex and socio-economic background—whose average IQ was 116. This group had an average mental age of just over 10 and their performances in the two series of tests were between one and a half years and one year 10 months behind this.

Comparing their relative performances by dividing their mental age by their tested age, Mrs. Painter calculated that the ordinary children's performance was about 5 per cent better than the gifted group.

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which she found was statistically significant.

Equally significant is the fact that the infants in both groups performed relatively similar percentages in a reading test. This might indicate that the underachievement of gifted children is not so marked during the early years of school and in a subject which is influenced by help given to the child by the parent, particularly the mother.

Mrs. Painter is herself a mother of a gifted daughter, aged 16. One of the reasons for underachievement is the well-known fact that many gifted children try to hide their talents. This came out strongly in Mrs. Painter's survey, which was partly financed by the Social Science Research Council and is to be made available through the British Library leading scheme.

A summary of her research is contained in *Gifted Children—Looking to the Future*, obtainable from the National Association for Gifted Children, 27 John Adam Street, London WC2N 6JH, £5.00. The book also contains an account of the first international conference on gifted children held last year.

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RSLA too much for Scots

by Bob Doe

Raising the school leaving age was one change too many, according to a report from the Scottish HMIs. Teachers were unable or unwilling to take it seriously and their resentment infected the RSLA pupils, few of whom benefited from the extra year at school.

The report, based on special visits made in 10 per cent of Scottish secondary schools, contrasts with the findings of a survey by inspectors in England and Wales and based on their "local contacts". The English report concluded that a "good start" had been made and that "almost every secondary school had reported some degree of success".

The Scottish report says that although secondary schools had better buildings and teaching aids than ever before and most were adequately staffed, RSLA coincided with an increase in pupils and comprehensive reorganization. This put heavy pressure on senior staff.

"Although some benefits have been gained by part of the population affected by RSLA, the progress achieved by the majority of these pupils has so far been limited", the report says.

Schools had concentrated on exam courses and ignored the new courses designed for the less able, with the result that many pupils became disenchanted with school and stayed away. "Many schools made only the most improvised arrangements for them; in other cases, ironically enough, few pupils were present to take advantage of well-devised courses."

RSLA also coincided with increasing discontent among teachers which led to industrial action over pay. "The whole climate in schools was not conducive to the success of RSLA," says the report.

"There can be little doubt that the attitudes of teachers to RSLA in part communicated themselves to the pupils. It was apparent in the period before RSLA that a proportion of the profession did not really expect it to take place and for many teachers under the pressure of other events it seemed to be a long way off and to lack the urgency of a time when it did there is no doubt that RSLA caused resentment among some teachers."

The failure of the various non-certificatory courses devised by national and local agencies was partly due to the teachers' unwillingness to move beyond familiar syllabuses and subject boundaries. More seriously, the more able RSLA pupils followed Scottish Certificate of Education courses instead of the non-certificatory ones designed for them. These courses proved much less effective for 20 per cent or so at the lower end of the ability range and contributed to the low esteem they were held in.

Some pupils on SCE courses had clearly benefited from the chance to take exams others were out of their depth and did not turn up for classes or exams.

"Although many head teachers had reservations about the suitability of SCE courses for a large proportion of the pupils being presented they considered themselves

Exam marking still baffles too many

Exams remain a mystery to many teachers. Some of them freely admit their inability to ensure fairness and comparability in marking, says a report on Mode 3 examinations from the Schools Council this week.

A survey of heads and teachers in 50 schools revealed a need for more training in the skills of examining. The report, by Mr Colin Smith of the Council's Examinations Research and Development Unit, says that Mode 3 is regarded with suspicion.

"Teachers detect it among employers and parents, especially where the course is different from a traditional one. There is also suspicion within the teaching profession. In the some, staff who are committed to the Mode 1 philosophy have doubts about the motives of their colleagues who use Mode 3."

In spite of courses run by the Department of Education and Science, examination boards and local education authorities, "there is a need for a training unit with a smaller mesh to introduce more teachers to the mysteries of examining."

The report says that "some" teachers lack experience and confidence, but gives no figures.

Entries for Mode 3 courses, where the school devises its own syllabus and assessment, contrast to Mode 1, where an examination board does both, are expanding. CSE Mode 3 entries increased 10 fold in the last decade compared with the increase in Mode 1 of less than four times.

In 1974, the year in which the survey was carried out, entries for Mode 3 CSE were 90 per cent up on the previous year compared with 42 per cent for Mode 1, though Mode 3 entries still ran at only a quarter of the 1.7 million entries.

For GCE O level the number increases were even greater. The only 35,000 Mode 3 entries in 1974 were up 10 per cent on 1973.

The demand for Mode 3 is growing, says the report, because of a wide ability range and a common system of examination. It is introduced, the report says, in schools where there is no power to reject a system which is correctly titled and being assessed and moderated.

If the demand for GCE becomes a flood to be met, it could follow the same pattern as the O level, where those who were the O level syllabus being submitted to a board as a Mode 3 syllabus, times there was no "serious" to modify their teaching to a mixed ability group.

Mode 3 made heavy demands on teachers' time, with 60 per cent of a year spent out of school on preparation for the course. Mode 3 examinations in 1974 and GCE, by G. H. Smith and M. H. Smith, Schools Council, £2.50.



What they do: demonstration playgroup in the Most of the Tower of London during National Playgroup Week.

Most parents want playgroups, say PPA

More than a quarter of a million people have signed a petition which calls on the Government to recognize playgroups as an alternative to nursery schooling. The petition was handed in at 10 Downing Street this week as part of National Playgroup Week, organized by the Preschool Playgroups Association to celebrate their fiftieth birthday.

Mrs Sandra Edwards, chairman of the PPA, said that the petition was "only the tip of the iceberg" of public support for playgroups. Parents want to be encouraged to take part in the care and education of their young children, not to be responsible to the state.

A report published by the Inner London Preschool Playgroups Association to coincide with the week says there is insufficient co-ordination between nursery schools and playgroups. However, the report says that the PPA has received money and help from the Inner London Education Authority which enables them to offer 9,000 children an alternative to nursery schooling.

London playgroups enjoy an unusual degree of cooperation, not with social services departments in the boroughs but with the local education authority.

An ILPA grant pays the salaries of part-time advisers who spend 15 hours a week during term time looking after 25 playgroups. The advisers also run a foundation for playgroup leaders at 11. They also provide equipment and play materials for the demonstration playgroups.

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30,000 in end-of-term job hunt

Only one in four of the 12,000 students who will leave training colleges in a few weeks' time have found jobs for September, say the National Union of Students.

And while it will cost about £30m in supplementary benefits to keep the remaining 20,000 in colleges, said Mr Charles Clarke, the NUS president, this week, a further £17m would guarantee them all jobs in the classroom.

Return from 75 of the 149 colleges of education surveyed by the union show that students in the southwest have been most successful in obtaining jobs: 35 per cent are fixed up for September. Wales and London are the worst regions: only 20 per cent have found work. Other regions are: North-west, 21 per cent; north-east, 21 per cent; East Midlands, 24 per cent; West Midlands, 23 per cent; East Anglia, 27 per cent; south-east, 27 per cent.

The worst hit college is in Swansea, where only 10 out of the 204 qualifying students have obtained jobs. Mature students are having the greatest difficulty. Those following a one-year postgraduate certificate course are finding it easiest.

Specialist teachers in mathematics and handicrafts are finding it hard to obtain work, but the union cited the plight of 15 students who will finish training at Wall Hall College in Hertfordshire, shortly. Although qualifying to teach the handicapped, they have been unable to find vacancies.

Eleven of the survey forms contained information from local authorities. Further London expected to make appointments in primary schools from this summer's college leavers; vacancies will be offered to those who were promised jobs last year. Resignations from ILPA primary schools are 30 per cent down on last year.

Only 11 primary vacancies are being offered in Liverpool and none of these will be open to the newly-qualified.

Students taking the normal three-year course are in every case obtaining jobs. Those on post-graduate or Bachelor of Education courses.

Less than two per cent of those questioned said they would be prepared to take jobs outside teaching. The NUS have called for the executive's decision to call off the dogs at colleges of education. They left quietly on Tuesday morning.

Students in Bradford took over education offices at Shipley Town Hall and Hklay Town Hall on Tuesday. In London, about 1,500 demonstrators marched from Hyde Park to a lobby of Parliament on Tuesday. Students also lobbied the TUC special congress on Wednesday at Central Hall, Westminster.

The Union Department of Education is to create 800 more teaching posts for the start of the new school year. A spokesman said there should be no great unemployment in Northern Ireland.

Prince sets out to help adventurous youngsters

The Prince of Wales has set up a trust to allow young people to carry out their own projects. The trust will make small grants to support adventurous, exciting or satisfying ideas.

The young people will be expected to make applications for themselves. Ideas that need long-term support or are sponsored by organizations will not be considered.

Some pilot schemes have already been tried out to see what sort of projects would be suitable. Some of the money for these experiments was given by the Drapers' Company who have also offered the trust a permanent address at the Drapers' Hall. The Prince is a freeman of the company.

In one case a grant of £150 was given to a young black group for driving lessons at a school of motor-

ing. Most of them could drive but had not taken the test.

Two boys sent to a special school for persistent truanting were given £34 so they could go on a camping expedition. The only condition was they prepared a full report about the trip afterwards. A grant of £100 was given to a youth worker and some boys charged with a large number of stealing bicycles. They bought frames and parts and were taught to build, repair and maintain bicycles.

The Prince's Trust has been formed after three and a half years of discussion with the social services, police, education authorities and probation officers. It is intended for young people living in inner city areas who are not attracted to highly organized schemes like the Duke of Edinburgh Award, but who would like to carry out their own ideas.

Among those involved in setting up the trust are Mr Peter Newsam, deputy education officer of the Inner London Education Authority, Mr John Lea Price, director of social services for Islington, and Mr George Pratt, deputy chief probation officer in Inner London.

At first, the trust will make awards only to applicants from Greater London, Northern Ireland, Wales, Strathclyde, Cornwall, Cheshire and Grampian. As more money is raised, it will be extended to the whole of the United Kingdom.



PERSONAL COLUMN

John Rae Blind swipe at wrong people

Let me deal with the latter first. If Maurice Peston had bothered to visit one Oxbridge college and ask about its admissions policy, he would have discovered that tutors for admissions have gone to extraordinary lengths to attract candidates from comprehensive schools and a glance at the entry statistics at the two universities would have shown him that candidates from different types of school are admitted in the same proportion as they apply.

So why does he come up with this canard about comprehensive pupils not getting a fair deal at Oxbridge? It is because he knows that many candidates from comprehensive schools (through no fault of their own) are just not ready to start on a degree course and could only be admitted if the entrance standard was lowered. His solution has a fascist simplicity: a quota system to ensure that university places go to the faithful rather than to the able. I cannot offend him, of another proposal for educational reform, that charges with this the distinction of being equally at home in Alice in Wonderland and Mein Kampf.

But let's take the parents - never a popular group with educational theorists - who provoke Maurice Peston into his most surprising errors. Like an after-dinner speaker who has dined too well, he blunders about to the embarrassment of his friends and the detriment of his cause. Maurice Peston, who sends their children to public schools of "distinguished" maintenance, the argument is to understand that if middle-

class parents sent their children to middle-class comprehensives in the leafy suburbs and the swimming pool belt, the sense of national community would be fostered. I fail to see how. But then I am sceptical of parental argument that uses the concept of community as an excuse to impose uniformity because the imposition removes precisely that factor of personal commitment that makes the sense of community real.

The reasons why parents opt out of the state schools, Maurice Peston tells us, is to get their "children away from those rough boys and girls in the local schools, and especially in some places the black ones". If he knew anything about children he would know that rough boys and girls exist in all areas of society; the idea that public schoolboys are gentle lambs who cause great mirth to those who are familiar with the history of these boys is not the rough boys seeking to avoid but teachers who are unable to control such children. These parents take the view that anarchy and learning are incompatible; it is not snobbishry they suffer from but realism.

As for the suggestion that parents are motivated by a desire for racial separatism, it is as baseless as it is unworthy of a commentator of Maurice Peston's standing. A superficial analysis will confirm that public school parents do not live in areas where there are immigrant communities; the question of avoiding black children does not arise.

I am honestly puzzled by Maurice Peston's attack, not by his timing. I am also denuded by his intellectual analysis. For example, in support of his argument, he says that schools are "overwhelmingly" not necessary to look for what has happened in the past. What disciplines of our society as a university professor regard as a sufficient argument?

It is one of the characteristics of the state school system that it has staff officers that they are not to acknowledge their mistakes or reinforce them by more men and materials into the state that is a touch of the staff. There is in the school staff a touch of the staff officer's attitude. There is a touch of the staff officer's attitude in Dr Rhodes. Boyson, Sir, in his piece in the *Times*, says that the school is a "rough" place. He is not the rough boys seeking to avoid but teachers who are unable to control such children. These parents take the view that anarchy and learning are incompatible; it is not snobbishry they suffer from but realism.

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One voice for local authorities?

A single voice for local authorities became a reality this week as local authorities considered setting up a working party to look at the practical difficulties.

There have now been going on for two years about the new body which could replace the Council of Local Education Authorities of the Association of County Councils and the Association of Metropolitan Authorities and the separate Association of Education Committees.

Before local government reorganization, all English and Welsh education committees belonged to the AELA, which was founded in 1964. It became a powerful channel of education, though other local authority associations also participated in national educational bodies.

At the power of the AEC and the education lobby caused resentment in the town halls. Local political education had no right to privileged treatment compared with other local services. It was wrong, they said, to have an association pressing for more money for education without reference to other local needs.

As a result of political pressure the AEC was stripped of its powers. It was removed from the House of Lords and its central bodies. But it did not fade away as completely as the politicians had hoped. Less than half of the 105 education authorities in England and Wales still belong.

In the meanwhile the ACC and AELA had set up CLIA, the representative of local education interests. But the need for a merger was reluctantly recognized by both sides.

Mr Peter Horton, chairman of the AMA education committee, said that a lot of work still had to be done, but he was confident that a single body would eventually be created. "CLIA has firmly established itself since local government reorganization as the central representative body for local education authorities but for 70 years the AEC has played an important and valuable role. It would be foolish for us indeed not to marry the strength of CLIA with the experience of AEC."

However, officers of the various associations are less optimistic. No one seems willing to disappear so that their interests can be represented by the new body.

There will be other difficulties. For example, one of CLIA's weaknesses is that it lacks a secretariat. The staff were transferred to do this job for the replacement body, what would happen to the AEC and its weekly journal, *Education*?

One official believes that one of the reasons for a merger with the AEC is sentiment. Many of the new officers had an inflated idea of the work done by the old AEC, he said. But however a merger was achieved, the old days would never return.

Cash for foster parents

Foster parents must be given allowances that fully recognize their value in the community, says a Department of Health and Social Security guide to fostering published this week.

Unless boarding-out allowances take account of pocket money, fares, outings, school uniforms, laundry as well as heating and lighting, foster parents will be forced to make unremunerable sacrifices, it says. Payments must not be delayed and the rate should be reviewed regularly.

The booklet has been produced by a working party on fostering set up in 1973 under the chairmanship of Mrs Janie Thomas, lecturer in social work studies at the London School of Economics. It is being sent to all local authorities and voluntary organizations concerned with fostering.

Another booklet for social workers, working with families who are thinking of adopting a child of a different race, was published last week by the Association of British Adoption and Fostering Agencies. It is based on the findings of a follow-up study on 51 families who adopted a racially mixed or black baby through the British Adoption Project in the late 1960s.

Most of the families and children have adapted well and are optimistic about the future, says the booklet. *Foster Care, A Guide to Practice*, HMSO £2.65.

Inter-Racial Adoption, The Association of British Adoption and Fostering Agencies, 4 Southampton Row, London WC1B 4AA. 60p.

Anger over university memo

University vice-chancellors have angered the National Association of Local Government Officers' Association in a confidential memorandum which opposes trade union representation on university governing bodies.

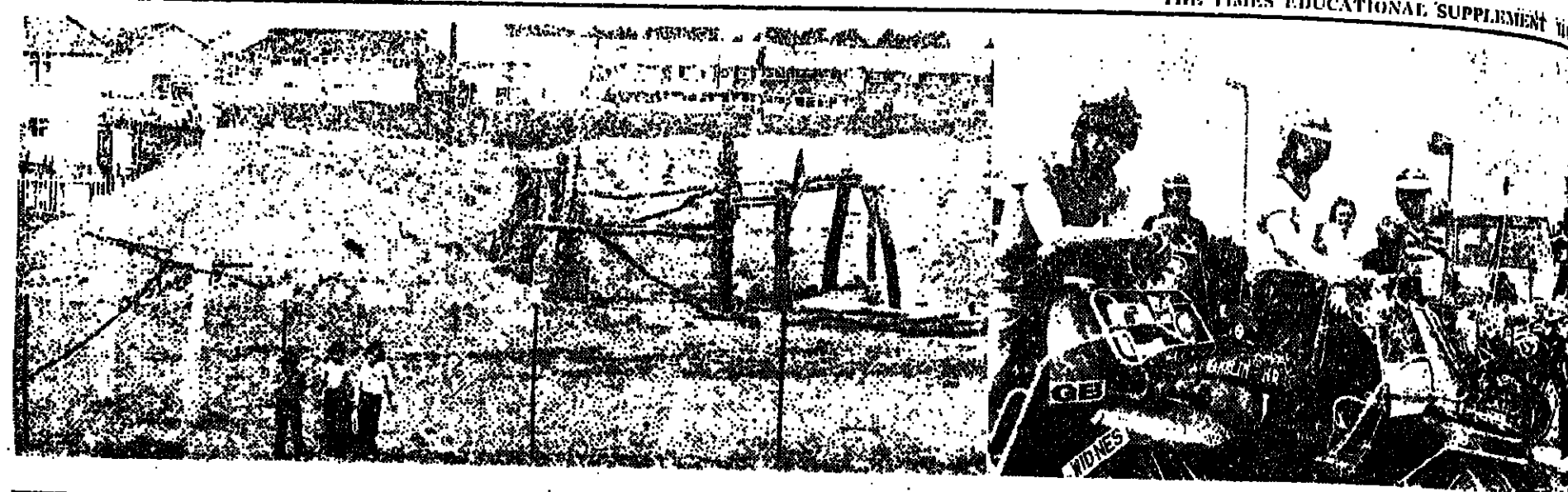
The document, which was circulated at the association's annual conference in Eastbourne last week, says that trade union representation should be avoided.

The memorandum was written last year as an internal working paper by a standing committee of the vice-chancellors' committee. A spokesman for the vice-chancellors said it did not represent a definitive statement. But NALGO are angry at the vice-chancellors' attitude to formulate an attitude on worker participation without consulting them.

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Tackling the vandals in their own backyards

Frances Stadlen reports on plans to revive a demoralised housing estate

Vandalism on housing estates could be greatly reduced if there were more places for children to play and if they were allowed to plant their own trees and plants, says a report published this week. It claims that children who are allowed to play in their own backyards, rather than in public play areas, they would take pride in their surroundings and be less destructive.

The report, which contains suggestions from people living on a council estate in Cheshire, was commissioned by the National Association for the Care and Rehabilitation of Offenders.

The estate concerned is the Cunningham Road estate, Widnes, where Halton district council are trying to reduce vandalism.

It is thought to be the first time that residents, including children of all ages, have taken part in detailed discussions about the quality of life on an estate. The report contains their views on what should be done to improve it which are highly critical of the council.

Mr Ron Burton, chief executive of Halton Council, said on Tuesday that NACRO had succeeded in getting something out of the discussions that the council had missed in their public meetings.

"I am confident that what has emerged is not the lobbyist view but genuinely represents what people feel. We have had the greatest difficulty in communicating with the residents. This report shows that, contrary to what we assumed, people are fully interested and concerned."

Mr Burton said he would not recommend consultations of this sort to any council who were not prepared to take criticism. "Don't go in for it if you don't want to take on a load of trouble and a lot of work. I thought I ran my own estate reasonably well. Now I've seen it from somebody else's point of view."

The council had learnt a lot about what the tenants wanted. "Tenants were asked for the first time what colour they would like their houses painted. Halton intended to carry out the improvements they could afford."

NACRO approached the council in 1974 after a survey of the district showed that nearly half the juveniles referred to Widnes social services came from the Cunningham Road area and that seven out of 88 Widnes children in care and several other "problem" families came from Cunningham Road itself. Cunningham Road was a demoralised, boarded-up area with windows, graffiti, broken glass, uprooted trees, refuse tips, damaged fencing, decaying

houses, noise and stray dogs. It appeared to provide the perfect conditions for NACRO's pilot project.

They wanted to see if vandalism could be reduced by improving the environment in which children grow up. Physical improvements, they thought, would be useless, unless they were wanted by residents. The improvements must also lead to improved morale and local pride so people would care about their surroundings.

The association asked Social and Community Planning Research, who specialize in public consultation, to organize consultation on the project. This included meetings with the relevant authorities, a sample survey of residents and discussions with small groups of randomly selected people from the estate. They were paid £1.50 a time for turning up.

Two of these groups were of adults, one each of men and women, and two were of teenagers, aged 11 to 14 and 15 to 18. The teenagers' groups were soon abandoned for more casual meetings where the local play-leader and priest helped to start discussion.

The consultation and monitoring phases of the project are being paid for by a grant from the Gateshead Trust. Halton Council will pay for any improvements made as a result of the discussions.

Mr Burton said that if their project is to be followed by other areas the money and effort contributed by the council must be within the normal means of any authority. They hope they have shown the council how to spend their money better, and what would be the case, as opposed to administrators, want.

Adults on the estate said children were vandals. They made a noise, dropped litter, sprayed graffiti and generally misbehaved. The SCPR found that the children did not seem to enjoy this. "Having off boredom seemed their main aim."

Most said they would like more places in which to meet and more constructive things to do, instead of wandering around aimlessly in gangs, showing off and causing trouble.

During the consultations an adventure playground opened and a youth and community centre is now being built. Mr Philip Ellwood, who has recently been appointed play-leader, said this week that the discussions had worked well. People on the estate had been surprised by the council's benevolence.

He attempts to involve teenagers in the management of the adventure playground

had not yet been a great success, but it had shown the children that adults were needed. The older ones had had to face up to this and now welcomed adults who were before them had been an "unrelenting generation-war".

The report said: "Parental discipline often seemed to be slack. Many children of 14 and 15 stay out till late at night and seem allowed a very free rein. The community as a whole exercised little control. Even a 'burly' group of teenagers making a noise outside his house."

The police also appeared powerless: "There is some fatalism on all sides about the possibility of doing anything until the law changes."

However, almost all the adults entered the 'vandalism' point that there would be less sport and entertainment and more organized, constructive activities.

The children were turning against each other as well as against adults. One young child said: "We can't go on the park because the big lads are there because my cousin was on the roundabout and they threw her off while it was going and so she went home. And they start up with her. There was one little girl, she was hanging on and they were keeping it going dead fast and she just flew off."

Although the survey and discussions were not meant to explain the causes of vandalism, the report on this part of the project does throw up some of the relevant considerations beside the need for more recreational opportunities. It also summarizes residents' views.

One of these is that schools should be used more by the community.

Mr Burton said negotiations with the education authorities were now under way. Mr Ellwood said that local schools had become noticeably less authoritarian. He thought that this change, increased parental involvement and the introduction of school-based social workers and counsellors would mean better community relations.

The report says that many residents feel schools have lost their authority. Most of the older children seem to have little respect for their school or their teachers. The early years of RSLA are throwing up a particular problem with resentful 16-year-olds who want to leave. Truancy seems common.

Most people felt the lack of discipline both in and out of school was related to vandalism.

However, they did not rate discipline, care very highly, and preferred clubs, grounds and centres run partly by children.

The SCPR were struck by the lack of contact between the various agencies: police, police, social services, probation, schools, youth and community, the many agencies all seem to move in separate grooves, change of information. Time is clearly being lost, but the differences in view are striking."

Residents agreed that tougher police would be helpful but they were not optimistic. However, when the police cracked down the gangs of teenagers appeared temporarily.

The SCPR found that after the police action "the children felt very aggrieved, victimized by what they saw as police action. In general, the children felt they were victims of adult repression. When the police moved on and harassed by police officers, their natural aggressiveness was put into a more controlled form."

Several people suggested that a police officer on the beat would help and one said: "They want to be more seen by the police catch them. They want to be seen because that's the worst thing you can do to a teenager."

It is vital, say SCPR, that neighbours all have good amenities. "Teenagers seem positively tribal in their territorial instincts. Trouble is likely to arise when groups from different estates meet together."

NACRO are conscious of the limitations of their project, and spell them out in their report. "The measurement problem is immense. Vandalism has no precise definition: acts of vandalism are sometimes difficult to distinguish from accidental damage. The cost of new spending arising from central or local pressures to improve standards or to extend services had been wholly offset by savings."

Of what then did that four per cent growth consist? According to the survey, said Mr Fieldhouse, two fifths of it was accounted for by

DES attacked over names on blacklist

by Stephen Cohen

A copy of the secret "blacklist" of teachers sent anonymously to the National Council for Civil Liberties contained the names of people who did not know they had been banned, the council said this week.

The Department of Education and Science compile a blacklist—known as List 99—of people considered unsuitable for employment as teachers. They claimed that all 1,200 people on the list were told in writing they had been excluded from employment.

Miss Patricia Hewitt, general secretary of the NCCL, said a council official had spoken to seven of the people named and three said they did not know they were listed. One had been told he had been banned from teaching but did not realize he was on the list. None of those contacted by the council is teaching at the moment.

The list sent to the NCCL contained full names, dates of birth and reference numbers, but no addresses. Alongside many names is a symbol which indicates if the person is allowed to teach in certain schools: "h" means the ban does not apply to boys' schools, "g" means the person can still teach in girls' schools, establishments of further education and the youth service.

Miss Hewitt said there were people on the list who had not been convicted of a criminal offence. "That does not mean to say they should not be teachers. It is probably necessary to exclude some people from teaching. What is lacking is any safeguard."

"We would like to see people informed that they were going to be put on the list and given a hearing where they could challenge the evidence."

The DES said everyone on the list was told in writing that they were included after they had been given a chance to contest it in writing or by interview at the Department.

Miss Hewitt said she would get questions asked in Parliament about the number on the list, how they were chosen and the procedure for challenging an entry.

Rising costs, falling standards

Spending by local authorities has risen faster than the rate of inflation but there are strong indications that the standards of their services have not improved. What, then, will be the effect on them of cuts ordered by the government? JOHN GRETTON reports on one county treasurer's assessment of the situation

debt charges and a further fifth by salary increments. The debt charges are the direct result of commitments to spend capital—mainly on new buildings.

Salary increments, however, are trickier. In theory, the large number of small increments for those at the bottom of the scale should be balanced by the smaller number of big increments no longer being paid to those who leave the service.

Mr Fieldhouse suggested three reasons why this was not happening. Extra appointments following local government reorganization meant extra numbers at the lower end of increment scales, with no proportionate increase in the numbers leaving the service; increases in increment payments following pay awards are not charged to inflation, as they ought to be, but to growth; the effects on increments of restructuring pay scales should also be charged to inflation.

"The 1975/76 survey showed the extent to which increases were committed by previous decisions and served to emphasize that real terms increases in spending are not necessarily the same as real improvements in services. In order to make room for increases in expenditure which cannot be avoided and which do not noticeably improve the services we provide it will be necessary to make equivalent reductions elsewhere if spending is to remain at a standstill."

Falling standards are not easy to demonstrate, but the survey showed that favourite targets for cuts were education and road maintenance. "In education, some authorities referred to worsening pupil/teacher ratios, although there were also occasional references to improvements in the ratio because of the difficulty of marginally declining individual school populations."

Several authorities reduced the provision for in-service training or for secondment of teachers and are to be more sparing in the introduction of supply teachers. Some administrative posts were deleted, as were technicians in further education where an attempt to improve class contact hours was evident.

At the younger end, many authorities appear to have reduced, or deferred or deleted some provision for nursery education and for rising fees. Capital provision has also been restricted for key sector schemes. In some cases, this may reflect opposition to education re-organization support for which in other areas have been the cause of increased provision. "Minor works and maintenance appear to have been popular targets."

Some authorities have been more individualistic in their search for economies referring to the introduction of extra protein in school meals, a re-arrangement of school holidays to save on high winter fuel bills or to an adjustment of school starting times to save on peak hour transport costs.

Despite these examples, said Mr Fieldhouse, "although almost all refer to the deformation of provision in most services, few treasurers are willing to admit to a general reduction in standards."

Part of the difficulty lay in the measurement of standards. "The implicit assumption that more money meant better services has always been questioned and, more recently, so has the assumption that our objectives were necessarily better achieved by the acceptance of levels of input—whether for pupil/teacher ratios, library books or road maintenance—which had either been recommended by some committees of inquiry or had grown to be regarded as self-evident."

Priority would obviously vary across the country in response to

varying standards, needs and political pressures. But Mr Fieldhouse then isolated four themes of common concern: income, housing and population movements, capital and manpower.

On income there was no generally accepted relationship between the amount spent in a particular area and the amount recovered in direct fees. "Education fees, for example, may need to be changed in April with the teachers' pay award instead of, or as well as, at the start of the academic year."

On capital, he said many authorities had not taken up the loan sanctions that central government had allocated them. Recoument at the high cost of the debt charges—the revenue implications—had been responsible for this. But local authorities were becoming increasingly suspicious of the way in which central government went about allocating the loan sanctions in the first place.

"The doubts are in no way eased by the knowledge that an approval rejected by one authority will be offered by the Government to a succession of other councils."

Mr Fieldhouse's answer was for central government to approve fewer building projects and to increase the grant support—for staff, maintenance and debt charges—on those it does approve.

On manpower, he detected "a tendency, in meeting budget targets, to preserve employment at the expense of other things. If local authorities maintain the existing labour force while services are contracting then serious problems of redeployment could arise. Specialization in the professions has developed to such an extent that substantial demands may arise for retraining, which local government is not at present equipped to provide."

Some means must be found of increasing the efficiency of the manpower we have in order to cope with present and future demands for local services while not increasing costs. The problem of motivating staff in a period of expenditure restrictions and of declining employment opportunities when work study and other organization and method techniques have already been well tried, will need careful attention."

Technology 'an ecological time-bomb' FE colleges head danger list, says factory inspector

by Stephen Cohen

Divorce, suicide, mental illness and violence and vandalism were increasing because of technology, Mr Robert Atkinson, director of the National Association for the Care and Rehabilitation of Offenders, told a conference in Brighton last week.

Speaking at the summer meeting of the Association of Colleges for Further and Higher Education, he said that some of the technological marvels of this century were "fuses to an horrendous ecological time-bomb."

"What has not yet been realized is that the sociological impact may be as dramatic. We only have to compare our lives with those of our parents and grandparents to measure the growth of 'temporal stress' in everyday life."

Human beings have a great capacity to respond and adapt to change but rapid change can be disastrous or even destructive.

"The significant increase in all advanced countries in the levels of divorce, suicide, mental disorder,

violence and vandalism is, I believe, part of the social cost of technological innovation. The increased mobility in society is leading to more nuclear families, more one-parent families and probably to the higher rates of illegitimacy and abortion."

"Change can bring loneliness and a general need for emotional comfort. Change can breed a sense of insecurity and inadequacy which can lead to aggression, disillusion, apathy, in extreme circumstances, these are the seeds of madness in society or madness in the individual."

Mr Atkinson said the ethics of work as "something creative to be done with pride and satisfaction" is being lost under "mean bartering, with the menace of sweated labour for the highest price."

His prescription was a liberal dose of education. "What is required is a period of reorientation of values and standards and a reshaping of attitudes. The education service is fundamental to that process."

Colleges of further education have a vital role to play in this

regeneration. Their position in the community, their involvement with industry and commerce, their networks of influence and particularly their ethical status give them a springboard of opportunity for this work."

"Young people need a foundation on which to base their lives," he said during a discussion on his paper. "They need strength and personal qualities to live through changes and to manage their lives. The education service must be one of the prime agencies to support this."

Dr Fred Cousins, chairman of the association, asked if a college could respond to the problems caused by the rapid expansion of technology. "A common ethic if half the half in Marx."

Mrs Joy Davies, a South Gloucestershire council councillor, said students were at college to work, not to have fun. She said that in a capacity as chairman of governors of a college she had turned down a request from students for contraceptive machines in the lavatories.

Further education colleges were the most dangerous of all educational institutions, the conference was told.

Mr David Phillips, deputy superintendent inspector of factories at the Department of Employment, said that FE colleges had emerged as the most hazardous in a pilot survey of educational buildings in Merseyside, Lancashire and Cheshire.

One polytechnic had 48 items of machinery that were unsafe. These included fans, milling machines, guillotines and centrifuges which were not guarded properly.

The initial survey showed 40 places with defective ventilation. These include darkrooms designed without either natural or exhaust ventilation and chemistry laboratories with fume cupboards without exhaust extraction.

About 50 serious fire hazards were found, including locked fire exits, the wrong type of extinguishers, smoke doors left open and highly flammable materials stored in escape routes.

The most dangerous places were college canteens with slippery surfaces and risks to staff from plant and mixing machines.

"The guarding of manual machinery leaves a lot to be desired. Mr Phillips said that most equipment suppliers appeared that equipment suppliers operated two standards: one for industry was generally better than that supplied for education."

Although there were many other hazards, including gas boilers without safety devices, partially blocked fire exits, and asbestos, he had found few students.

Mr Phillips's survey on the implications of the Health and Safety at Work Act will be completed in two months. Under the Act, employers in this case the local authorities have a duty to ensure the safety of their employees. It was a moot point, he said, if students were considered since they were not employed by the authority.

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Ministers and MPs stand by to repel EEC boarders

There is no doubt that, among Labour MPs at Westminster, Mr Mulley can count on full support for his actions. The attitude of the Liberal Party, as expressed last Friday through Mr Jeremy Thorpe, appears to be one of support for the Government. This is in line with their actions on the Education Bill, which is still awaiting the continuation of its report stage.

opportunities to touch were ing—but it shouldn't necessarily be a soft option."



the authority does not appear to have involved the exercise of any of their statutory functions; it is not, therefore, within the potential scope of the Secretary of State's powers. Without detailed inquiry Mr Mulley

was offered to school leavers to sign a declaration at their employment benefit office that they were able and willing to take any suitable job; and what were doing to ensure that benefit is only paid to those genuinely

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well as scholars need for more studios where visitors could see what they had seen, in their own creations. "The studios to be touched were the very stuff of life," says the museum education director, "and we want to create a climate for enjoyable and profitable learning—but it shouldn't be a soft option."

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Union fears wave of redundancies

from our correspondent

DUBLIN The unexpected closure of a small secondary school in a County Wick market town has thrown the teachers' union concerned—the Association of Secondary Teachers of Ireland—into a frenzy of activity aimed at preventing widespread redundancies in the profession.

At a time when teacher unemployment at secondary level is high—at least half of this year's Higher Diploma in Education graduates from the universities will be unable to find jobs in the Republic—the prospect of retrenchment by the religious orders who control the huge majority of the country's secondary schools is an additional cause for concern.

Some secondary schools have already been closed, but by and large they have been in relatively under-populated rural areas where they were not viable. The decision to close the Christian Brothers Secondary School in Newry, County Cork, comes into a different category, both because it is possibly the first such school closure which is taking place other than as part of a community school reorganization plan, and because it is the first of a new policy from a religious order which is one of the staunchest defenders of denominational education.

Throughout the period of reorganization which was touched off by the *Investment in Education* report in 1964, the Christian Brothers order has remained hostile to the idea of amalgamation: one of the more obvious reasons for this is that its rules still forbid it to educate girls, which creates a total obstacle to their participation in coeducational schools.

The order has also been affected by the decline in religious vocations, and has several schools in which only one or two of its members remain, usually as principal and manager. The latest move, it is thought, may be part of a new policy designed to ensure that they maintain a stronger presence in the remaining schools by redeploying their available manpower.

The ASTI also fears that arbitrary closure of smaller schools could well be used by school managerial authorities as a bargaining counter in the controversy about school principalships in religious-run schools.

Sweden State set for education export drive

from Mike Duckenfield

STOCKHOLM A State company to promote and coordinate Sweden's entry into the educational exports business is almost certain to be set up shortly. An announcement by Mr Carl Lidholm, Commerce Minister, is expected later this summer that the new agency will start work next year.

The decision will follow investigations into the likely market—mainly among the oil-rich Arab countries—made last year when Mr Bertil Zachrisson, Education Minister, set up a committee for international cooperation in education comprising representatives of six Government ministries and the Swedish International Development Authority (SIDA).

The realization of the commercial possibilities of exporting educational programmes and assisting in the development of education in other countries is a new business for Sweden, and equipment and staff for the purpose are being developed. The committee is also looking at the possibility of sending large numbers of foreign students to technical and professional courses at universities and colleges.

Mr Hans-Erik Gustafsson, head of the Education Ministry's budget and planning section and chairman of the committee, said they were very much interested in taking a lot of foreign students because of adaptation and language problems and fears that students would want to stay in Sweden. At present less than 2 per cent of students in Nordic countries are from non-Nordic countries.

Although Sweden has had extensive experience in providing educational aid to developing countries it is now to the business of exporting assistance commercially.

Before the committee's creation progress had been handled by the aid agency SIDA.

However, several countries receiving aid—most of which are in Africa, Latin America, Asia, and the Pacific—had approached SIDA for further assistance on a commercial basis. The agency, however, has been unwilling to compromise its position as a provider of free, Government-financed aid.

The committee's efforts in the past year have concentrated on Algeria and Libya with more preliminary discussions with Iraq, Egypt, Iran and Nigeria. Algeria's interests lie with vocational education in the paper, wood pulp, electronics and steel industries and the

two countries are currently engaged in talks on the construction of schools, purchase of equipment, teachers' training and the recruitment of Swedish staff.

Libya wants Swedish staff for its new university teaching hospitals at Tripoli and Benghazi and the admission of Libyans to Sweden's school for marine studies at Gothenburg.

With a domestic shortage of vocational teachers, especially those with a knowledge of French, Sweden's main problem is the export field is finding sufficient staff for overseas recruitment. In addition, with salaries comprising the major element in aid costs, Sweden's comparatively high wages put her at a competitive disadvantage with other education exporting countries like France, West Germany and Britain.

The main hope centres on the attraction of Swedish "know-how" and the committee are confident that salary disadvantages can be overcome by marketing the educational programmes and professional staff in developing countries during the past 10 years of extensive school and college reforms. Such programmes have already been pioneered as part of aid to Cuba and Pakistan.



Literacy class in Tanzania, with books supplied by Sweden.



Supporters at a Communist Party rally in Rome this week.

Young voters' crucial role in election

from Dalbert Hallenstein

ROME In Sunday's general election more than 2.5 million young people between the ages of 18 and 21 will be voting for representatives in the Chamber of Deputies for the first time. The franchise has not, however, been extended to the Senate, where electors must still be at least 25.

This discrepancy could lead to an entirely novel situation in Italian politics. Pre-election polls have indicated that voters between the ages of 18 and 24 are significantly more radical than older voters (understandable in a country with almost one million unemployed young people), and this factor could contribute to the formation of a left-wing Chamber of Deputies opposed by a conservative Senate.

Since the foundation of the Italian Republic after the Second World War, the Senate and the Chamber of Deputies have never been politically opposed. The failure of the 1975 franchise reform law to extend the Senate franchise could, therefore, lead to a paralysis.

West Germany Political parties pledge end to entrance restrictions

by David Dungworth

After many years of annual rises in the number of young West Germans seeking university places and a corresponding lengthening of the list of numerous university subjects the entry restrictions for entrance to higher education for everyone who has passed the *Abitur* examination.

The slogan originated with West Germany's top advisory body on higher education, the *Ams* and Science Council *Wissenschaftsrat*. By limiting the duration of studies to three or four years, by clamping down on students who switch courses, take up a second course after completing the first or repeat examinations and by increasing the number of hours which would be needed to teach it, the *Ams* would be able to remove entry restrictions in all subjects except medicine within three years.

Although the plan has been criticized as Utopian, the underlying notion of making admission to university dependent on "only one possession" of the *Abitur* and not, as at present, on an applicant's average mark in the examination, has met with wide approval.

At its annual meeting in Trier last month West Germany's Committee of Vice-Chancellors devoted most of its agenda to the problem of university entrance. Professor Werner Knapp, the committee's president, urged institutions to make a determined effort to absorb the estimated increase in applicants of 70 per cent by 1985. This will mean the university accepting an "overflowing quota" for some years to come and heavier teaching duties for academic staff.

A more positive move has come from the body responsible for allocating places in numerous university subjects, the Central Office for Uni-

Teachers' unions face on collision with the province's Government. Quebec teachers' unions face on collision with the province's Government.

Michael Binyon, North America correspondent, reports from Montreal.

Longue trouble key source discontent

There has been a difficult year for teachers in Quebec. On top of continuing tension over the language issue, there has been an unprecedented wave of teachers' strikes and school closures have become a regular feature. The teachers' unions have become increasingly restive and the Ministry of Education responded with a ban on striking until the end of the year.

The teachers' unions remain locked in conflict with the provincial Government over salaries and conditions, and have announced that they will resume a campaign on harassment when the school year starts in September.

The situation has led a respected educationalist, M Yves Martin, rector of the French-speaking University of Sherbrooke, to declare that the whole school system in Quebec was seriously threatened.

At the same time, many parents, who have many children at the door of the schools, have adopted a more pragmatic attitude. They have not been too keen to join the teachers' unions, but they have been quick to join the parents' associations. They have also been quick to join the parents' associations.

In all this, however, the flaw has been an almost overzealous, though progressive, Ministry and a dissatisfied teaching body. As a result, strikes and disruption have led to a general disillusionment, particularly with the innovative junior colleges.

More and more parents have sent their children to burgeoning private schools. These are more traditionally disciplined and more successful in many parents' eyes, to obtain better results—especially in history, French and general education subjects.



Teachers in London demonstrating in favour of their Quebec colleagues.

and entirely codified, M Martin believed.

This would indeed be a step backwards for Quebec. Until 1964 the province had one of the least developed systems of education in any major western country. Public secondary education for French-speakers was, practically non-existent; nearly all secondary schools were private, Church-controlled institutions, with great emphasis on traditional subjects such as philosophy. French-speakers lagged far behind the English-speaking majority in access to university and in general educational attainment.

But since a major report in that year, the province has been deeply committed to a policy of *rattrapage*—catching-up. It has spent a great deal of money on new schools, a liberalization of the curriculum, a unique new system of junior colleges to bring all students—Anglophones and Francophones—together before university and an expanded network of French-speaking universities.

In all this, however, the flaw has been an almost overzealous, though progressive, Ministry and a dissatisfied teaching body. As a result, strikes and disruption have led to a general disillusionment, particularly with the innovative junior colleges.

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Post-comprehensive plan gets cold shoulder

Mike Duckenfield, Scandinavia correspondent, recently in Copenhagen, reports on the rejection by Parliament of Danish Government moves to make 16-19 schooling more attractive.

Post-comprehensive plan gets cold shoulder

A Bill to broaden access to the upper secondary schools catering for academically inclined 16-19 year-olds has been rejected by Parliament. Voted down during the last sitting before the summer recess, it would have meant the introduction of a 12-year period of continuous schooling.

The proposal, which Mrs Ritt Bjerregaard, Education Minister, asked Parliament to agree in principle prior to a five-year trial period, would have allowed for a three-year post-comprehensive school education for all who wanted it. At present access is limited to those who pass an "entrance" examination.

The further three years would have prepared students both for higher studies and professional life. While in the short term vocationally oriented courses would have been closely adapted to employment conditions, in the long term barriers between academic and other learning would have been broken down. This would have enabled easier transfer between courses and a return to tuition after a period in work.

Entrance to the school would have been possible for comprehensive school (*folkeskole*) leavers irrespective of the level they attained in the main subjects studied during their final three years of compulsory schooling—English, German, mathematics and physics with chemistry.

In seeking to broaden access Mrs Bjerregaard wanted to make further schooling attractive to a wider range of school-leavers as well as older age-groups. The proposal and lower age limits on entry would have been removed; there would be no necessity to apply for places on leaving *folkeskole* and student grants would have ensured that no potential student was deterred for financial reasons.

The results of the changed access rules would have been to give parents and pupils the decision on whether or not to continue with schooling rather than leave this in the hands of the school principals.

Studies would have been organized around a common core of general subjects with opportunities for vocational training and pre-university studies. Practical work experience would have been offered to all and employer and trade union organizations invited to advise on curricula and syllabuses where it was felt they had a special competence.

Despite the parliamentary reverse, it is expected that the Education Ministry will quietly go ahead with some trial activities along the lines of the reform and that the Government will continue to reintroduce similar measures until the climate of opinion changes.

Cheap paperbacks proposed

A new State-supported company to publish cheap paperback editions of serious literary works is to be sold on newsagents' stands and in supermarkets has been proposed in a Government Bill as part of the current three-year cultural aid programme.

The books would cost five crowns (about 60p), less than the price of 20 cigarettes or a pair of public titles would be published with 18 in each of the next two years during a three-year trial period. Paperbacks normally cost between 15 and 25 crowns.

First proposed by the Government

Commission on Literature in the early 1970s, the company would be supported by an annual State grant of 2.5m Skr (£310,000).

First, however, the Government has to reach agreement on the scheme with commercial publishers, booksellers, book shops and authors.

The proposal follows last year's stage in the aid programme which gave commercial publishers state support in the publication of 650 titles annually covering new Swedish fiction, translations, classics, children's and youth literature and standard non-fictional works as well as increasing aid to libraries, film makers and cultural activities for immigrants (TES, May 2, 1975).

South Africa Hopes for more foreign staff

JOHANNESBURG Prospects of a Government campaign to recruit qualified teachers for South African schools from overseas have been held out by Dr Piet Koornhof, Minister of National Education.

He told Parliament that as a short-term solution to the shortage of teachers in various specialized subjects, he was considering plans for the recruitment of staff from abroad.

There were two problems about the scheme, he said. One was that the overseas teachers would not be bilingual and the other was that teachers' salaries in South Africa were comparatively low.

He repeated his earlier undertaking to introduce a new salary

structure for the teaching profession as soon as possible. Dr Koornhof said special emphasis would be laid on persuading more South African men to enter the profession.

Dr Koornhof said that a Cabinet committee was currently discussing guidelines for the recruitment of teachers. Recommendations would be submitted as soon as possible.

Other educational matters receiving attention, said the Minister, were the revision of the present over-loaded syllabus structure and the possibility of establishing an English campus at the Afrikaans University of Pretoria and an Afrikaans campus at the English-language University of Natal.

Louis Horz

Employers offered extra aid to engage apprentices

from William Farr

The Government has decided to increase the number of apprentices, particularly in trades and crafts. It is yet another effort to provide technical training and to find jobs for more young people 16 to 19, who Heinrich Schmidt called for the complete abolition of the *dukkon* clause in all faculties but medicine by 1977.

Colleges must provide places for many more students during the next few years. If necessary, using buildings and equipment of increasing size by 5,000 a month over the coming years. It estimates that around 80 per cent of apprentices found jobs at once, or soon after they finish, with the employers to whom they were apprenticed.

To persuade more employers to take on apprentices complicated and time-consuming administrative procedures will be reduced and simplified.

It can now take 12 months and signatures to process a firm's request to be recognized as an employer of apprentices, and therefore further long delays before individual contracts are finalized.

The system under which employers can recover, after two years' delay, a part of what they pay apprentices will be abolished. In place of it the state will pay employers' contribution to social security for each of its apprentices.

Holland Cutbacks clip spending by only 2pc

from Arnold Lissauer

AMSTERDAM Education has only been marginally affected by the Government's cuts in public expenditure, the aim of which is to reduce total spending by eight billion guilders (about £1.8 billion) by 1980, mainly by keeping the growth in expenditure within a 1 per cent annual limit. Over the next three years education will be cut by only 2.1 per cent of the 1976 educational budget of 37 billion guilders.

Nursery and primary education will escape the axe entirely and plans to cut class sizes from 35 to 31 for nursery and primary education have emerged unscathed.

Further and scientific education bear the brunt of the economy measures. The introduction of compulsory part-time education only applies to 16-year-olds who have to attend general courses two days a week.

Scientific education will be hit by cutting down building programmes. The costs of running a university meals service will be reviewed and the automatic financial promotion of university lecturers will be scrapped.

Total savings in education for 1977 will be 186 million guilders, rising to 497 million guilders for 1980. Details of the measures will be announced in greater detail in the forthcoming annual September budget.

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Understanding children reading

Margaret Spencer
looks at the implications
of some
striking new research on
how children
become successful readers

When I see children choosing and reading books in a library, when I read with them in school or talk with them about what they have read, I am pretty confident that I understand the nature of the business they are engaged in. It powers my life too, this traffic with print. But I draw a blank whenever I ask competent readers, even those as young as eight or nine, about how they learned to read. The best efforts of the caring infant school teacher pass unregarded. The children talk about the older brother or sister who laid bare the mystery, the parent who read or told stories, the tracing book bought in the market or the signs on petrol stations. I believe them, for those are my recollections, and our literature is scattered with similar testimony further back than that neglected genius, Comenius.

If I ask a lecture hall full of teachers in training, whose ears are ringing with the recommendations of the Bullock report, how many of them could read before they were formally taught, only four in 60 (the number is stable over three years of asking in a variety of institutions), say that they had no idea of what reading was about before they went to school. These four then recall particularly the mismatch between the instruction ("sound it out") and the fluency on

which success depends. ("I was told to listen to the sounds the letters made. It took me ages to realize I had to say the words for myself.") Thus a goodly number of those responsible for teaching children to read successfully learned out of school, either by teaching themselves or by methods with no professional status.

When I teach an adult classed as illiterate, or a secondary school fourth-former whose reading experience is compounded of failure, I now recognize a problem that cannot be solved by a method of instruction, for no discussion of skills explains how competent readers go about reading, realizing what is in it for them. Non-readers see themselves as different kinds of people for whom a kind of magic simply does not work. They do not know what constitutes success, what it would be like to be a reader. And teachers, who have proved that reading above all things is what they are good at, need a staggering leap of the imagination even to begin to empathize with this.

Inquiries, some rigorous, some scattered, none casual, suggest that, although the reading process may be the same for most successful learners, each of us learns to read in a way that is distinctly idiosyncratic. We make the text mean something.

The diversity of styles of making it mean has encouraged the belief that no reliable testimony about the exact nature of the reading process can come from real readers. Since research, the groaning library shelves of it, begins elsewhere, with ears and eyes, for instance, or, more particularly, with what some children cannot do, like recognizing words on a list.

We long to know the nature of the learner's interaction with the written language, yet we persistently turn away from the strategies and sources that make the successful reader successful, because these seem to exclude the teacher. We

assume that children who teach themselves have above-average intelligence, a bookish home, or linguistic stimulus of a distinctive kind. By the same token the poor reader is television-saturated, book-and-talk deprived, or so the legend runs, although the evidence to support any of these assumptions is notoriously scanty and soft.

What might we find if we shifted the focus of our concern from what some children cannot do to what many children can, without the teacher's help? If we compare what the experienced reader does with what we try to make others do, would we not be better informed about the nature of reading than we are from a constant preoccupation with reading ages and test results?

Better still, if we looked at what kind of material the successful untutored beginner actually reads, would that not also help us to see how he sees himself, how he values the task, or what gives him motive, power and skill to do before he goes to school what some of his peers fail to do in the 10 years that they are in school? Where are the longitudinal studies of readers reading?

In 1969 June W. Torrey published a case-study of John, the five-year-old middle child in a black family of five. John lived in the conditions of poverty usually associated with reading failure, yet he could read very well. He had taught himself to read from television and the labels on tins. His mother reported he knew television commercials by heart and recited them as they appeared. Dr Torrey found he could spell anything he wanted her to write down for him and that his non-standard dialect was no hindrance to his reading. "He appears," she said, "to have asked just the right questions in his own mind about the relations between language and print." What were these questions?

Dr Torrey's case study is reprinted in Frank Smith's *Psycholinguistics and Reading* which appeared in 1973, two years after *Understanding Reading*, a book which he suggested that what the skilled reader can do and what the beginning reader is trying to do are "more important for the reading teacher than any revision of instructional materials".

In January, 1973, still before the Bullock Committee had made uneasy bedfellows of those who saw reading as a hierarchy of acquired skills and those who insisted on its contiguity with all other language learning, Margaret Clark presented a paper at a seminar on language and learning in which she quoted this sentence of Frank Smith's at the end of a summary of recent research.

She said that reading could not be efficiently tested "without an analysis of the learning process in reading. Particular attention should be paid to sequential progression through a hierarchy of sub-skills. It may be that some of these steps are merely hurdles or barriers—interspersed as a result of the types of approach to the teaching of reading employed in schools". In other words, teachers (or psychologists) had made up a model of reading from a way that it is possible to structure teaching rather than from the nature of a child's learning, about which we still know practically nothing, because we discount the evidence of those who can tell us about it.

To make good this lack, Dr Clark has now given us *Young Fluent Readers: What Can They Teach Us?*, a study of 32 children who were reading well enough when they came to school at five to be considered beyond the risk of subsequent failure. Her "intensive analysis of these children", presented "in narrative form" with extracts from case

histories, includes an account of the pupils' home background, school progress and performance on a number of tests associated with reading. It is a striking and important study, the implications of which may be far-reaching, not least in the way we tackle research.

When they arrived at school able to read, the children, 20 boys and 12 girls, were tested, rigorously and exhaustively, for intelligence and all the skills and subskills associated with reading. The parents then brought the children to Glasgow University on two occasions, two years apart. The home and family background were closely studied. The children's physical characteristics (e.g. left-handedness), their early experiences (e.g. illness) and all the acknowledged factors, the hallowed ingredients of reading research, were put on record.

The children and parents were asked about the early progress towards literacy. The children made the same responses as in less clinical inquiries ("I just go on to the next word and see if I know what it is"), while the parents, modest and diffident about their children's success, repudiated the suggestion that they had done any teaching beyond answering the children's questions about words or letters. Like Dr Torrey's John, the children seemed to know the right questions to ask. The teachers supplied information on a report form, and the children's progress in school was monitored for the two years of the study.

The results should be read in detail. While it is true that the children were exceptional in many ways, they were neither uniformly precocious nor specially tutored. Some were not above average in intelligence. Auditory and visual acuity were not so remarkable as to account for the early success. Their language skills, undoubtedly, considerable, are more likely to be the result of their early reading than the cause of it.

It seems more appropriate in the light of recent research in this area, the present results on the psychological measures and the communication skills shown by children in a variety of situations, to consider their early reading as one offshoot of their developing language skill.

The focus then shifts to the family background, and here all the evidence points to the interaction of the child with an interested adult who has time and enthusiasm. Many of the parents had left school early, but were avid readers. The mothers especially read widely.

The richness of support for education which these families were providing was not measurable on scales such as social class, father's occupation, father's education, mother's education—or even the number of books in the house. . . . The lesson from these interviews was a clear one: that it is crucial to explore the parents' perceptions of education and the support and experiences they provide, by measures far more sensitive and penetrating.

The parents said their children (from the age of four) "devoured" a print of my kind, in the environment, in newspapers, stories, television commercials. They could not describe how the children first learned, but confirmed that listening to a sibling and learning a story by heart also helped. Their contributions were casual rather than systematic. Twenty-five parents said the initial interest came from the child. More than half of the children were using the public library. One had a ticket with his age faked.

The teachers reported that the children's precocity did not make them anti-social. It did, however, make them demand of themselves a high standard of written composition and purposive functioning. In the writing they did in school, the fluent readers showed their skills to the greatest advantage, when writing on topics of their own choosing.



Richard and Sally Greenhill

Stodge, prunes and a wider view

Recollections

Jacky Gillott,
novelist and journalist,
remembers
boarding school life in the
fifties

Fortunately, I have a lucky birth date. Lucky, because falling with such apparent inconsequence where it did, I was entitled to a second go at my 11-plus. The secondary modern nearly had me. And lucky, because I have reason to love the direct grant girls' school I attended in Lancashire.

Most of all—to start with—I loved school dinners. By the time school holidays were drawing to an end, my juices

were desperately conjuring up fragrant reminders of stew, the dense floury smell of potato, the sweat of cabbage and the cosy vanilla tinge of custard. I even adored stodge and prunes and ate up anything the other girls left. Things they culled from spawn and cat's sick with currants in I hungered for. And for as long as I could queue on the concrete path outside the dining hall waiting for the first sitting to finish, ravenously guessing from the drifting scents what delights awaited me that day, I was utterly happy.

I was plump, greedy, lazy, a dunce at maths and domestic science, a moderate achiever in other fields, and possessed of a longing to shine on the hockey pitch. It did not disturb me to be dressed in a curiously ugly collection of brown garments. And I did not care if I came round about middle in the exams, though I should have liked to beat Allison Perry, the vicar's daughter, who had tidy hair, never stopped smiling and knew the answer to everything.

I was happy and I had a gang. My awareness of things outside myself was negligible. The girl with the blue face in the corner of the classroom, I barely noticed. She was dead by the time she was 14.

It seemed unexceptional that the French mistress occasionally lay down on the desk and screamed, showing long Chinese knickers reaching down to the knee. When the maths mistress sat me in front of her so that she could slam me

over the head with a large world atlas every time I got something wrong, it did not strike me as unfair or abnormal. We contended rife. We wore hats with elastic under our chins and thought there was nothing funnier in the whole world than the sound of someone farting.

Hormones put an end to all that. The whole order of things was reversed at puberty, as though one's blood suddenly turned round and flowed the other way. Looking back, I wonder at the violence of the change. Clearly it was not as traumatic for all the girls; many of whom always had. Even their gymnasts did not begin to look bulgy and odd. They remained neat and obedient and seemed to avoid both boils and styes on the eye. All they acquired was a faint air of middle age.

I became unhappy and stopped eating altogether, trading in my dinner tickets by the deal. I won a prize for transgressions of my own and hid in the lavatory at four o'clock so that I would not have to walk home with my best friend. I did not want to jabber any more. I fainted on the hockey field. I swallowed 20 tablets and lay down, in vain, to die. How lucky for me that my birthday fell when it did. For I came under the teaching care of Kathleen Johnson, the senior English mistress. Tiny, birdlike, with eyes as big and as blue as Wedgwood plates,

she seemed to be attached by silvery, invisible wires to a invisible world. She had travelled. She spoke several languages fluently, spoke English melodramatically, like an actress. She had had, it was firmly believed, lovers. She invited me to her home where she lived with her mother and several Siamese cats. She lent me books on Paul Klee and Franz Marc.

I lost four stone but she kept me alive on *King Lear*, D. H. Lawrence, Hardy and *Samson Agonistes*. She fought bitterly hard for me to go to her old college, St Hugh's, at Oxford. And although she failed in that particular endeavour and I fell into school to go to work, I went on her knowing it) working on the wall she had given me. My first novel was dedicated to her.

Last year—nearly 20 years later—I found her again. She had been sent to the hospital for rheumatic diseases in Bath to have her poor arthritic joints treated. Small and upright, her eyes as defiantly blue as ever, she seemed barely altered. I was able to take her the new novels I had been given to review and we talked about them. We talked of the old school teachers, the French mistress, the maths mistress and she called them by their ancient nicknames. It was a revelation to know they were current both sides of the staffroom door.

She, who had brought me a sense of movement, a view of wider worlds, sat in her wheelchair incapable of walking. I loved school long after I ceased to love rice pudding because I loved her.

While it is possible to see here the strength of the Scottish work ethic, these findings do not confirm the folk lore about advantaged children who just take off because they are lucky in their genes or their bookish surroundings. The common factors singled out by the parents were a degree of concentration and a tendency to self-sufficiency: being alone with a book was a pleasure.

Margaret Clark points to something nearer the heart of the matter: how they do it. "Most read orally in a manner quite different from the 'precocious' reader who has learned at school and who has frequent experience of oral reading in a classroom setting. Indeed, many seemed to be slowed down by reading orally and perhaps to have their errors increased and comprehension lowered."

The clue is in the last two words. Successful readers make it mean right from the start. Their questions are about words and letters to this end. This is confirmed in the discussion of the test results. "Discriminations, visual and auditory, are the cues which help the page to mean something, and the reader, not the test, decides which these are." Clearly these children go about reading like readers, with high hopes that meaningful language will operate for them in this printed form so that they can take it on for their own satisfaction.

Think, now, of children who fail, and we are bound to ask if the help we offer them makes them better at the tests or encourages them to behave like readers? Ask, too, if tests like those administered by Neville Bennett have any relation whatsoever to what reading is all about? "It may be necessary," says Margaret Clark, "to consider those steps which are frequently regarded as sequential are so only because of the structure within which we teach reading rather than the

pattern within which children learn to read." Reading, as Frank Smith showed us, is whole-task learning.

Part of the learning pattern is what children read. Here the research is at its weakest. The children kept reading diaries for January, 1973, but the small use that is made of the results shows, in comparison with the exhaustive examination of the tests, that the researchers attach little importance to the great wealth of children's literature that is available to able readers. The importance of the public library in the lives of the children is fully acknowledged as "a striking feature of this study", but it is the institution, not the books, that is acclaimed. The number of quoted book titles is curiously small.

The children's tastes are wide-ranging and in their story-telling and written work they show a remarkable ability to capture the voice they heard on the page of a book. Their bonds with authors are firm. There is a fascinating paragraph in *Brave Scots* where a child recounts his enjoyment of *Toni Sauter*. Margaret Clark uses it to show that his strobic dialect did not interfere with his reading or his ability to write standard English. What she fails to note is that he is also trying to recapture the tone of the original.

There is no evidence of how children come to understand the conventions of written language or literary rhetoric. What clearly emerges is that they can exploit and use the abundance of books in the library while their teachers are clearly less knowledgeable about what is available. One boy's father wrote, diffidently, to a teacher to say that his son was bored with Janet and John. He was given *Treasure Island*, which he liked.

This fascinating study shows us on

what a shaky basis our teaching of reading rests, for all our preoccupation with it. "It is dangerous to assume, without evidence to support it, that the way we teach is the way that children learn," says Margaret Clark. "We are still not nearly clear enough about the nature of the child's interaction with the written language, the story, the meaning, the information. Our reading studies are still, in James Britton's words, more bound up with text than message."

To discover more, we have to move to the interface of the meanings the children bring to the text, the nature of their expectations, the contexts they have built up for their language, the shaping of their awareness and the message they get from the print. We need to examine the interpretative process that brooks no delay in getting to the sense, that is pushed on by the reader's determination to make it mean.

Encouraged by Margaret Clark, may we now shift from a concern with teaching reading to helping children to learn to read? Can we look even more closely at how the reader sees the activity, the way he construes himself in the role of a reader? Add to this the variety and nature of the satisfactions that come from all kinds of books, and we shall begin to move closer to understanding the success of children who teach themselves, so that we may remove the hurdles we put in the way of those who need real help rather than drill. To learn from the fluent readers, we must first be willing to be taught.

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*Published this week by Heinemann Educational, £1.70.

A question of definition and judgment

Carl Slevin on concepts of toleration

Toleration. By Preston King. Allen and Unwin £6.95. 04 320112 1.

Not all intellectuals live in ivory towers, cut off from society and their fellows in the cause of intellectual purity. Some others believe that they can justify their existence only by self-conscious and direct engagement in the issues of the day, deliberately ditching any efforts towards fairness or objectivity. As always with extremes, both "academics" and "radicals" are right and wrong at the same time. A third group take the most difficult but also the most valuable approach, and accept the need to maintain a position above the social battle in the knowledge that their work will nevertheless be transmitted and adopted by the contestants at one or two remove. One of the main problems of this approach is to express ideas in a form which gives as little chance as possible of distortion even after repeated simplifications.

"Democracy", "justice", "freedom" and all the others must be clearly understood by those on the decision-making shop floor. If anything worthwhile is to result, analysis of the concepts we use in everyday political debate is therefore a real contribution to that debate, not an abstract enclosed activity important only to its practitioners. Preston King's book is just such an attempt to encourage us to understand the internal logic of the concept "toleration" and its place within our universe of concepts.

For a start, he defines toleration in negative terms as the opposite of intolerance—which he defines in turn as the combination of an objection to some item plus action to destroy, remove or disadvantage that item. Toleration therefore covers a range of phenomena from, at the maximum, the complete abolition of the negative assessment and the abandonment of any negative action, to the mere suspension or reduction of negative action while the negative assessment is maintained. The ultimately positive form of toleration is seen by Professor King as democracy, the creation of a system of equal rights.

The minimal form, he defines as tolerance.

That these definitions differ greatly from ordinary usage does not in itself matter. It is a good thing to keep as close as possible to the way people really use words, but there may be overriding logical reasons for not doing so. However, Professor King's treatment does seem to take problems of its own, whatever difficulties it may have. In defining tolerance as a sub-category of toleration, and to leave the one or two narrow areas to which current tolerance statements refer, while making the other so large as to include everything from tolerance to democracy by way of indifference, unconcern, approval, partiality and favouritism, is not helpful.

If I dislike blacks but nevertheless put up with them then I exercise tolerance. But what if I have to object to blacks at all but try to avoid selling my house to them because I believe that property prices will fall and I wish to protect my neighbours? On Professor King's definition, I am not being intolerant, but in British society at the present, not only would most people (whether they like blacks or not) think I was, but the law would be invoked to stop me. His only way out is to insist that any specific example of tolerance necessarily implies a corresponding intolerance—I tolerate my neighbour's house, and am therefore intolerant about anything which would reduce them.

But to make the acceptance of any argument, feeling, prejudice or whatever into forms of toleration seems to rob the concept of what little precision it had after the original definition. Bagbags may be necessary, but should not be expected to contain a Saville Row regalia.

Perhaps these difficulties stem from the author's attempt to define toleration formally in value-free terms. This leads him, not merely (and properly) to look at the particular kinds of toleration discussed in contemporary society with as much objectivity as he can muster, but to separate that concept from beliefs about what is right and wrong.

It might well be better to recognize that intolerance occurs not

simple when we dislike or disapprove of something and act against it, but only when, at a particular time, the assessment and the action are the subject of a negative moral judgment which is known to us though not, as yet at least, accepted.

Professor King draws certain practical recommendations from his analysis, mainly that toleration can only be fully achieved in a society based on equal rights. The conditions required for such a society to exist are freedom of speech, publication and assembly along with the (almost universal) right to vote. Even then, such a society will fulfil its democratic end only when the majority constantly changes its composition so that no individual or group is permanently excluded from it.

A step along the way to this ideal would be the extension to groups of the legal principles relating to libel or slander in the case of individuals. If an individual can obtain judgment when untrue or damaging statements are made about him in public, then why not a group which is similarly defamed? To show how this could operate without abandoning the toleration of ideas which the philosopher, Professor King distinguishes from the purely political reference to "that most virile of creatures, the black negro", from the careful researches of Arthur Jensen who presents evidence and arguments for public debate. In Professor King's world, the former would be open to legal action, but the latter, however right or wrong he may be, would not.

Again, there are problems. Why does the author insist that wherever any attempt is made to preserve primordial identities—race, colour, tribe, language or whatever—then we are necessarily confronted with a system of unequal rights? The efforts of the Basques to maintain their identity is not a claim to be superior to Spaniards; it is merely a claim to be different. The preservation of identity, as long as it is not directed towards the denigration of others, may well be every bit as worthy of toleration as that of which Professor King advocates.

But however we treat this concept, we must recognize that if intolerance is goodly, then to be tolerant is insufficient.



A 19th-century figure of a female deity, one of the themes of C. G. Brown's excellent "A Concise History of Indian Art" and Hudson £4.50. The author writes from the standpoint of quality and directness of Indian art makes it accessible to knowledge other than that basic to all humanity is needed, it indicates this view.

Foul mouth, warm heart

Anthony Masters on St. Jerome

Jerome: His Life, Writings and Controversies. By J. N. D. Kelly. Duckworth £10.00. 2 156 0800 2.

"The deeper springs of his personality elude us... there is an unsolved enigma about the real Jerome." Dr Kelly's sigh of despair, coming at the end of this extraordinary biography, hardly does himself justice. Though scholarly and almost too circumstantial, this lively book paints a more absorbing and convincing picture of Jerome, and other figures in fourth-century society, than many studies of more recent periods achieve.

While documentation for Jerome is patchy, leaving some periods virtually untouched, about 150 letters survive, as well as prefaces to published works in which he rarely failed to mention a current feud or preoccupation. In human relationships, even scholarly method, the personality that emerges is highly unattractive. He was touchy, spiteful, foul-mouthed, plagiaristic, prejudiced and vain. His abuse of opponents, invariably those who disagreed on points of theology, is hysterical.

When a friend of 40 years' standing, Jerome called him a "scoundrel... who will perish in his own pus." He accompanied a plagiarist with abuse of the authors.

Neo-Classical Dramatic Criticism 1560-1770, by Thora Durnley Jones and Bernard de Bary. Oxford: Clarendon University Press £5.00. 2 20857 2. Paperback £2.25 (p.p. 71 4).

The introduction on Aristotle and Horace points the essential back to the period, and a bibliography, tailored to the limited scope of the book concludes this brief but stimulating survey.

Among this week's contributors:

Geoffrey Breerton is co-editor of the Penguin Book of French Literature.

Asa Briggs is Professor of History at the University of Sussex.

T. R. H. Du Boulay is Professor of medieval history at St. John's College, University of London.

Richard Waller is at Cambridge.

Carl Slevin lectures in politics at the University of Warwick.

Playing the game of happy families

Turner

Many Children? By Ann Cartwright and Kegan Paul. £3.50. 0 6341 X.

Five Years On. By Myra Wolf and Sue Pegden. Penguin £1.00. 0 11 700812 5.

Demographers' forecasts are not as reliable as many unemployed teachers might wish, but it seems that the statistician's typical family—mother, father, son and daughter—is becoming more and more common. No fewer than 78 per cent of mothers either want or are content with two or three children according to Cartwright, in the Woolf/Pegden survey, while 61 per cent of mothers in 1967 thought two children ideal for people "like themselves". By 1972 the proportion had risen to 78 per cent.

The trend is to less variation in family size, says Cartwright. There is no indication that single-child families are becoming more popular and the number of families of four or more is declining. The more women work before they marry or start a family, the more they receive further education, the more they share in decisions and live in homes they own, the more the trend towards smaller wanted families is likely to continue. Give women the chance to choose the sex of their baby and after an initial spurt in demand while families added the sex so far missing, there would be even fewer families of more than two.

The live birth rate dropped from 93 per thousand women aged between 15 and 44 in 1964 to 71.7 in 1973, and both Cartwright's survey and the Woolf/Pegden study attempt explanation and speculation around this statistic. Both carried out surveys in 1967-68 and

again five years later, and both interviewed 1,400 women. In fact, Cartwright's team talked to the mothers (and fathers) of a sample of legitimate births and the Woolf/Pegden sample was the same married women who could still be traced from the 1967 survey.

Such a lack of forward planning does not inspire confidence and both surveys are suspect when it comes to childless couples, Cartwright's survey excluding them and the Woolf/Pegden survey basing against them by method. Whether the Office of Population Censuses and Surveys should be funding two surveys overlapping so seriously might be disputed, but it must be with a sigh of relief that it finds the conclusions are essentially the same.

In 1973 four-fifths of married couples were using relatively reliable methods of contraception—the pill, coil, cap, sheath or sterilization, compared with two-thirds in 1967-68 according to Cartwright, and the Woolf/Pegden survey shows a similar proportionate increase, though with lower figures. Use of the pill had jumped from 20 to 43 per cent, while sterilizations had tripled. Use of the sheath had been cut by about a third to 23 per cent and withdrawal by two-thirds, to 8 per cent. Even so, nearly half of pregnancies are either unintended, initially regretted, wrongly spaced or accidental in the sense that contraception was being attempted. Indeed, the numbers of initially unwelcome pregnancies have not declined significantly, though Cartwright's partial explanation for this—that people now expect to be able to control their pregnancies and are more likely than before to regard an unexpected pregnancy with dismay—is important.

The idea of birth control has certainly gained acceptance. Only 2 per cent of mothers in Cartwright's survey disapproved of it,

Paperbacks

Green and pleasant land

The Politics of Physical Resources. Edited by Peter J. Smith. Penguin £1.50. 0 14 08 10021.

This book presents five case histories of conflict between the public and authorities in the battle against the depopulation of the environment, plus a chapter on the framework of the relevant law. Intended as source material for Open University courses, conclusions are left to the reader; to the all too limited literature available in book form on the subject, it affects the grass roots. It will surely prove invaluable not only to Open University students but also at the sixth form level.

Human Geography: Evolution or Revolution? By Michael Chisholm. Penguin £1.00. 0 14 02 1883 1.

This is a book about geography, rather than a geography text; a book for geographers, but also for the interested layman, in the tradition of Penguin and Pelican science specials. Whether geography is a science or not is one of the questions of the book, as is the question of the subtitle. Has there been a revolution in geography or a more steady evolution? Different ways, the subject is now very different from the dull collection of facts inflicted in a happily bygone time, and this volume is to be recommended to anyone whose only experience of the subject was that dullness, as well as to the professionals who have lived through the changes.

John Gribbin

Colin Ward

Methods of measuring

Seamus Hegarty on social research

Sociological Analysis: Methods of Discovery. By John A. Hughes. Nelson £2.50. 0 17 712117 3.

Doing Field Research. By John M. Collier. Macmillan £5.95. 74 27599.

When you ask a question you have already determined the outline of possible answers. More specifically, you have made it impossible for certain answers to be given or certain insights to be generated. This is as true of methodological procedures in the social sciences as it is of everyday questioning. For example, the exclusive use of survey techniques to measure the effects of television will certainly give an incomplete picture. Questionnaires may suffice to determine how often I watch violent programmes (though even that is debatable since people's concepts of violent behaviour vary) and how often I engage in specific acts of violence, but they will not provide evidence for other than simple-minded accounts of the links between them.

There is a great need for more conscious attention to method than has been accorded it in either the social sciences or educational research. Hughes's book endeavours to locate various sociological methods in a broader context than that of mere data gathering. Methods are not neutral tools. They have to be seen as part of a meaning system which provides their justification and indicates their area of relevance. What Hughes is doing is to draw attention to this ideological dimension

of method. He considers in turn scientific method, participant observation, questionnaire and survey techniques, cross-cultural analysis and formal modelling. It hardly needs to be said, of course, that this is not a book for learning how to do research. Its concern is rather with being aware of what one is at when he is doing it.

Doing Field Research concentrates on one of these methods—participant observation. There is a splendid first chapter reviewing the literature on the problem of objectivity in sociological method. Subsequently, however, there is very much more about the author's journey in self-awareness while engaged in field research than there is about field research.

Research reports do contrive to present the investigation as a thoroughly rational and planned affair and Johnson is concerned with his discovery that this is not always the case. It certainly was not the case in his study of welfare practices in California. The very topic was chosen because of personal contacts in the welfare agencies which gained him entry rather than any particular interest in welfare or conviction that it was a problematic area. It is salutary, perhaps, to be reminded of the informal side of research from time to time. This account, however, gets to be redolently like a poor man's sociology of knowledge as the catalogue of mishaps and untoward incidents builds up and we are studiously informed of the implications for the research project of each one. One takes the point but—

as my editor says—frequently, brief is beautiful.

A new stimulus

A new bi-annual journal, *Studies in Higher Education*, published under the auspices of the Society for Research in Higher Education, includes topics such as "The Necessity of Examinations" and "The Reform" and "Course Teams at the Open University" in its first issue (March, 1976).

It aims to publish contributions from specialists in all fields in the form of case studies and articles on educational theory and concepts, in order to stimulate the interchange

of ideas on teaching, learning and academic organization.

The editor, Tony Becher (professor at the school of education, Sussex University), sees a dual policy for the journal: that of demonstrating "that higher education is a worthwhile field of intellectual inquiry" and providing a forum for academics "who invest considerable thought in their teaching activities" but who at present lack any clear public recognition of their efforts.

King of the Road

Joyce Nolan

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I have only two major reservations. Some of the extracts are selected according to adult ideas of what is amusing or interesting. My other reservation is one of selection of subject matter. There is only a peripheral mention of the economy, we hear little of the great herds of sheep, the wine trade or the mines. This shows perhaps a slightly old-fashioned notion of what history in schools is about with a disproportionate place given to the actions of rulers.

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100

The Science Museum have opened a new gallery to present the history of the gas industry. Called simply the Gas Gallery, it explains the manufacture of gas from coal as well as how it is stored and metered, the manufacture of gas from oil, and finally the finding and extraction of natural gas from beneath the earth or seabed. The gallery boasts an animated display (10m by 2.5m) of the British natural gas transmission system and a model of a drilling floor of a North Sea rig. For more information contact the Education Officer, Science Museum, South Kensington, London SW7 2DD.

Film selection

Model of West African Economy

The pack costs £2.45, including VAT, from Unicef Greeting Cards, 84 Broomfield Road, Chelmsford, Essex.

11

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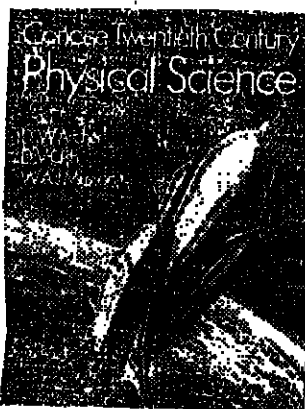
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This book is intended for pupils who need to achieve a CSE standard in the physical sciences. It has been written by three experienced teachers who are well versed in modern approach and method, and are conscious of the needs of the less advanced student. The minimum of arithmetic and the maximum of diagrams and illustrations have been included, particularly for those who are not mathematically inclined.

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I. C. Comber

This booklet, part of the series entitled The Educational Use of Living Organisms, will be of help to teachers involved in the selection, maintenance and use of living organisms in both primary and secondary schools. It will also be of interest to teachers in training and colleges of education.

£2.45 0 340 17051 4

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F. W. Kellaway on an O level and CSE maths course

Oxford Comprehensive Mathematics, Books 1 to 5. By C. S. Bunwell, J. E. Hiscocks, D. Pilling, K. D. Wardle, M. E. Wardle and C. J. Weeks.

Oxford University Press. Teacher's books £2.50 to £4.00 each. Pupil's books £1.25 to £1.75 each.

This new series is evidently concerned with an all-embracing content presented in such ways as to be suitable for virtually all children between approximately 11 and 16. It takes its place alongside two others: the Middle School Mathematics and Making Mathematics, all three "are closely linked in their philosophy and approach and have authors in common".

These authors are teachers of esteem and established reputation who have served in schools and have subsequently been associated with two leading colleges of education, Coventry and St Luke's, Exeter. Different combinations of

members of the team have been specifically responsible for various books in the series, but it is a tribute to them all that there is little internal evidence which would suggest a particular attribution. All the books carry a common hallmark of high teaching efficiency.

The texts themselves follow an interesting pattern. Books three, four and five are each available in a pair of alternative versions, one set leads to any GCE examination the other to the CSE. Despite the view of some pessimists, these aims in no way contradict the opinion above that the series is "suitable for virtually all children".

Teachers who are adept at a qualitative, not just a quantitative, sense, and who maintain the higher traditions of their profession, and given an insistence that school is a place for application to work, then some examination attainment is feasible for the great majority.

Irrespective of this argument, however, the first two books are common, being designed for unstreamed classes, words, for example, sensibly enough, some rubbing between basic and another stage which is most children's and the more able. Topics are introduced in the most logical way, then more dual pieces through the various end-points.

Teachers' books include answers and practice pupils' workbooks, models are available for individual contents, for they include every topic likely to be covered in the course. Each book the layout consists of "Projects and Questions" and finally "Think, Discuss and Find Out". There is also a

Learning by module

Alan Sherlock on algebra

Beginning Algebra: A Modular Approach. By Irving Drayton and William Wooten.

Module 1 to VIII £2.00 each. Natural Numbers, 471 22267 4. Integers, 471 22268 2.

First Degree Equations and Inequalities in One Variable, 471 22269 0.

Products and Factors, 471 22270 4. Functions and Fractional Equations, 471 22271 2.

Graphs and Linear Systems, 471 22272 0. Radicals, 471 22273 0. Quadratic Equations, 471 22274 7.

John Wiley.

This is a set of American programmed texts, with spiral wire bindings, which covers the topics which are normally part of a course in first-year algebra (that is about 14-year-olds). In this country, however, algebra is integrated with the rest of mathematics so that the range of topics covered extends from first to fourth forms.

The authors claim that the modules can be used in a variety of ways. For reasonably capable pupils who cover the entire programme, it represents a complete first-year course. Preferably, the text should be supplemented with periodic class sessions or individual conferences with a qualified mathematics instructor.

Each of the modules can be used independently of the others as a self tutor for those who, for some reason, have missed class tuition. The material is presented in a traditional way. Each module contains a list of objectives, prerequisite test (except Module 1) self-evaluation tests, exercises and answers.

Tuition is by simple, guided instruction and questions with the correct responses on the left hand side of each page.

Natural Numbers runs through prime numbers, "four rules", prime numbers factored and exponential

forms, algebraic expressions and polynomials, order relations and number line graphs. Integers extends this work into the set of integers. First-Degree Equations, equivalent equations, axioms, word problems, solution of inequalities, number line graphs, solutions in set notation. Products and Factors contains the distributive law, products like $(a+b+c)^2$, products of binomials; factoring; quadratics; word problems. Fractions and Fractional Equations—fractions in higher, and lower terms, "four rules", complex fractions, fraction equations and proportion.

Graphs and Linear Systems—first-degree equations in two variables, co-ordinates, straight line graphs, simultaneous equations, inconsistent and dependent systems. Radicals contains roots, rational and irrational numbers, standard work on surds. Quadratic Equations—solving by factors, extraction of roots, completing the square, quadratic formula and inequalities in two variables.

These modules did not appeal to me. They seem lifeless, the vocabulary unnecessarily complicated and there were few questions to arouse any interest. To complete this course, the pupil would need dedication, high motivation and an excellent grasp of mathematical logic.

The remarks of the authors which appear frequently will give the flavour of the books.

"Now that we are familiar with the vocabulary and the basic laws associated with the operations of arithmetic, our next task is to begin relating these operations to variables, and to combinations of variables and numerals."

Having mastered these texts, the pupil should have a reasonable facility in the techniques discussed, even though there are not, effectively, a large number of questions to be worked. I fear, though, that the pupil will have little understanding, less interest and probably an undying dislike of algebra.

Playing triangles

Taxicab Geometry. By Eugene F. Krause.

Addison-Wesley £1.65. 201 03934 6.

Despite its intriguing title, there is little that is novel about this book. It is a collection of putting together some considerations of space relationships based on a grid.

The objective appears to be in would travel in a straight line from one point to another, a taxicab would need to move along two sides of a right-angled triangle of which the hypotenuse is the shortest path.

(This, of course, presumes that all streets are in two sets, one all parallel to each other, and the other all at right-angles to all those in the first.)

On this flimsy foundation is erected a pleasant "non-Euclidean geometry" for example, "conic sections" triangles and "urban geography". Its aim is stated as "exploration of 'real-world' applications" and a posing of "original, not accessible research questions". But one is left wondering for whom is this intended, and what purpose it serves?

F.W.K.

inding out

Breeze on O level physics

very useful and comprehensive booklist. The content in every case includes a wealth of material to supplement even the best of standard textbooks, and there is plenty of information to illustrate applications. For example in *Man and Machines* there are some excellent illustrations of applications of mechanics in athletics. *The Dancing Electron* is a first class electronics course in itself, far more than is required for any O level course. Members of the Science Society or Electronics Club would enjoy them.

A new title now available in this series is "Looking into materials" by L. J. Taylor (75p, 08 018292 5). Published in association with the series is "Secondary Physics Outlines", by E. O. James (95p, 08 018662 0).

Modern Revision Questions in Physics. By A. C. E. Jarvis and C. N. Gregory.

Heinemann Educational £1.30. 0 435 67540 0.

For pupils preparing for the physics or physical science examinations of those boards which use

objective questions this book could be particularly helpful. It combines carefully planned revision with an introduction to, and practice in, the modern types of question. There are 22 sets of questions covering all the standard physics topics from motion, through force to charged particles and atoms. The questions themselves comprise the well-established true/false, multiple choice, multiple selection and assertion/reason. Fortunately there are also some planned questions which students should find particularly helpful.

Good use is made of simple, clear diagrams. Candidates could benefit considerably if they learnt to imitate them. The content of many of the questions is refreshingly new and the authors are to be congratulated on this. Some very hard work and care have gone into the compilation of the work. There are, for example, some valuable variations on standard lens questions. Simple recall is required, of course, but thought is needed as well for most of the questions.

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Albert Einstein and Relativity. By D. J. Raine.

Priority Press £4.50. 85078 2090.

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Behind the myth

John Gribbin on Einstein

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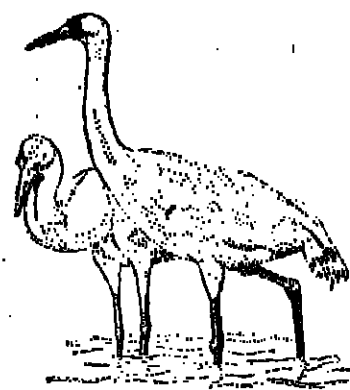
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John Gribbin on energy

Fuel's Paradise. By Peter Chapman. Penguin 75p. 0 14 052 316 2.
The Energy Question. By Gerald Foley and Charlotte Nassim. Pelican 90p. 0 14 02 1924 2.
Sources of Energy. By Erica Denby and Christ Swadlow. Tyndall £2.25. 0 85949 083 1.
Energy Options in the United Kingdom. Edited by S. R. Canaduc. Basil Blackwell £3.00. 0 223 1539 45 X.

World Resources and Energy. By Michael Palmer. Batsford £2.50. 0 7134 3017 6.
Understanding Energy. By Michael Overman. Lutterworth £2.30. 0 7188 2082 7.
New Sources of Energy and Power. By Egon Larsen. Frederick Muller £2.95. 0 584 10228 3.

The best of the recent crop of energy books are also the cheapest. Peter Chapman's *Fuel's Paradise* (in spite of the silly title) and Gerald Foley's *The Energy Question*.

Both come from the Penguin/Pelican stable, but whereas Chapman seems to work alone, Foley writes "with Charlotte Nassim, Consultant Gerald Leach". Perhaps because of the strictures of collaboration, Foley's book is more formal and provides a very solid guide to the availability and use of energy. Futures are mentioned, but these are really the forte of Chapman's more "chatty" book, whose subtitle "Energy options for Britain" defines its scope clearly. This is an easy, as well as informative, read.

Discussion of the basic situation of fuel supply, use of energy and so on is followed by sketches of three possible future scenarios: business as usual; technical fix; and low growth. There is a good bibliography, a comprehensive reference list, and the book is very reasonably priced. My one major

criticism is that even though the author does provide a brief discussion of the possible impact of fuel use on climate (such as dust in the air, and the carbon dioxide greenhouse effect) he does not consider the effects on his three scenarios of the climate "normal" of 1916-50 (the basis of current climate planning) turns out not to be so normal in terms of the next 50 years.

Inexcessively, Foley's book has no index. Although both are to be strongly recommended, and are well suited to a sixth-form reader, this astonishing omission suggests that it funds only allow one purchase then that should be Chapman's book.

Chapman is also a contributor to another recent book, *Energy Options in the United Kingdom*, but this, alas, is not worthy of the same recommendation. The book provides the proceedings of a symposium sponsored by, among others, Friends of the Earth, the Conservation Society and the Environmental Communications Organisation.

Chapman's contribution covers in more sketchy outline, with less accurate calculations, some of the work described in his own book, and this is representative. Most of the material here has been presented more completely and in more polished form elsewhere; on that basis, this expensive little book (£3.00 for 128 paperback, typewritten pages with no index) is not a good buy.

The same can be said of Egon Larsen's *New Sources of Energy and Power*. There is nothing here about how best use might be made of the alternatives available, and it is a little strange to see nuclear power and wind power presented as "new sources". This is a good read, but without being very informative; perhaps one for the school library rather than for use as a text. On the other hand,

Sources of Energy, by E. Swadlow, is not even mentioned for the library. This book (or pamphlet) is very slight, but it took two economics professors to write it.

A least you get value for money. With Michael Overman's *Understanding Energy*, all the above faults are unfortunately, the author's own doing. It is really a very good book, with a very able text.

While emphasis on the part of United States oil and the ultimate prospects of man-made nuclear energy, the author's super-opinionated by his solution to the problems of nuclear energy is to rocket-launch into the air. Unfortunately, since the book is written for a general audience, it is not a good starting point for a serious study of the energy problem, but it is valuable in the context of a broader course on the subject, perhaps, *Fuel's Paradise* the main dish.

As a final volume to read, such a course could do well to read Michael Palmer's *World Resources and Energy*. Written by the headmaster who clearly knows his subject and his audience, this is a very good book, with good illustrations, built around the subject of energy. It is a very good book, with good illustrations, built around the subject of energy. It is a very good book, with good illustrations, built around the subject of energy.



The shifting sand dunes of Death Valley, California: one of the environments which cannot support life illustrated in "The Ecology of Terrestrial Plants, Oregon, 1970, £13.95". This is an academic ecology textbook with many diagrams and illustrations, mostly of American land features. It claims to bridge the gap between living texts and inadequate paperback treatment of the subject.

Pipelines to wealth?

Oil. A plain man's guide to the World Energy Crisis. By Philip Windsor. Maurice Temple Smith £1.95. 0 85117 083 8.

The New Oil Stakes. By Jean-Marie Chevillon. Allen Lane £4.95. 0 7139 09072.
Shetland and Oil. By James R. Nicholson. William Luscombe £4.95. 0 86002 087 8.

Much has been written on the development of the oil industry, and the changes over the last few years. Philip Windsor's book provides a useful introduction for the general reader to the interests of the producing and consuming countries, and of the oil companies, and their moral and economic responsibilities.

For the future, he emphasizes the importance of dialogue between consumer and producer nations, the plight of the new oil producing developing countries, and the need to develop alternative energy sources, some of which he describes briefly. It is unfortunate

that the book does not contain any indications for further reading, but this perhaps reflects its aim as "a plain man's guide".

By contrast, Professor Chevillon's book, originally published in French in 1973, represents a significant contribution to the literature. His analysis is based on the view that the oil took place in 1970-71 from decreasing to increasing marginal costs in the exploration and production of oil. He analyses the activities of the producing and consuming countries, and of the oil companies, in terms of the share-out of the oil surplus, the difference between the market price of the oil, and its production and processing costs.

The background to the Tehran and Tripoli Agreements is described, and a convincing case is made that the price increases were to the advantage of the United States where oil production costs were relatively high. Although the book draws heavily on the French experience, it is a fascinating analysis for the English reader, although aimed rather above the Sixth

Form market, it contains material that would be of value in any discussion of the energy crisis.

The United Kingdom's energy position will be transformed in the next few years with the production of North Sea oil. An important group of oilfield lies off the Shetland Islands, given rise to much controversy. Given these (pipeline) energy supply, heat, power, etc., and the impact of this new industrial activity, James Nicholson provides a useful background on the aspects of oil exploration, production, and processing. The book's main purpose is as a highly readable account of the actions of the Shetland Islands Council and the Shetland Islands Council's activities on the islands. The book is a well-written, well-researched, and well-illustrated account of the energy crisis. It is a well-written, well-researched, and well-illustrated account of the energy crisis.

Breathless

Introduction to Air Pollution. D. G. Palmer. New Educational Press 0 904025 14 4.
Inquiry into Environmental Pollution. By R. H. Harvey. Allen Lane £2.35. 0 7139 09072.
Pollutants and Animals. By M. Morley. Allen and Unwin £5.65. 0 05 21 9.

Although all these books are suitable for use in secondary schools, only the first two are specifically directed at this audience. The third, however, will provide a useful background for more advanced students. The technical skills required suggest that the book is more suitable for use in the 16 to 18-year age group (at least one fascinating experiment seems to require that someone should climb a factory chimney), but the text is elementary by comparison. The beautiful colour photographs of dust under the microscope are of no use except as pretty pictures, as there is no specification of the magnification, illumination and background in each case.

fresh air?

Interpretive skills are being developed. Some of the background information seems directed mainly at 12 to 14-year-olds, but the content could be presented at a deeper level for older pupils working through the same experiments.

Introduction to Air Pollution seems to be intended as a pupil book, in which case it is a useful and easy-to-follow guide to the subject. The book contains a number of experiments which are useful and to students' benefit. Although it contains a number of experiments which are useful and to students' benefit, it is not a very good book for use in secondary schools. The book contains a number of experiments which are useful and to students' benefit, but it is not a very good book for use in secondary schools.

Things to come

Future Environments in Britain Series. Future Leisure. By G. H. Hardy. 304 29553 1.
Future Landscapes. By Roger Thomas. 304 29554 X.
Future Environments. By Michael Beresford. 304 29555 8.
Collins Macmillan £1.10 each.

These booklets appear slight, with their 60 or so pages, but each is so densely packed with information and with elucidation of quite many pupils, even at the top of the secondary school, might find them very going. Readers will not be helped by the small print and frequent long sentences. However, they are impressive books and worth study.

Future Leisure competently outlines the balancing of interests, which may create difficult problems. The author explains the central importance of looking ahead and how this is done. There

are many small but relevant sections of questions and exercises about choice of site for a sports centre or how certain places on a map can be linked.

Specific environments are examined in detail—the Trent Valley, the "Seaside", and others. The book is a useful and to students' benefit. Although it contains a number of experiments which are useful and to students' benefit, it is not a very good book for use in secondary schools.

Future Environments is an intrinsically fascinating subject, and there are not many superfluous words. The problems are less complex, although no less difficult to solve, than those outlined in the companion books, and there is therefore less discussion of principles and more factual material.

Surveying methods for oil, coal and gas are explained, along with legal problems of ownership, life on an oil rig, details of the drill and new uses for coal and gas. Not enough space, perhaps, is given to romantic sources such as sunlight, wind and the tides and there is surprisingly little to say at present about nuclear power, because technical problems are holding up proceedings. But the book is a vivid and provocative survey, with discussion it could be most useful.

Ecology

One Approach to Ecology. By Arnold Darlington and Alison Leadley Brown. Longman £2.50. 0 582 32321 5.

A book on ecology which does not appear to be too plentifully centered with graphs, histograms and formidable looking tabular statements is a pleasant change. The authors recognize this and approach the subject from the point of view that "sound natural history remains what it has always been, the basis of sound ecology".

Over a quarter of the book is devoted to a study of one animal (the woodlouse) and one plant (the creeping buttercup), so that when the student pursues the subject, further behaviour and the effect of various physical conditions are properly understood.

Future Energy is an intrinsically fascinating subject, and there are not many superfluous words. The problems are less complex, although no less difficult to solve, than those outlined in the companion books, and there is therefore less discussion of principles and more factual material.

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SCHOOLS PROM

Applications for tickets to attend the next Schools Prom on November 29th and 30th should be made to the Royal Albert Hall, Advanto Bookings, Kensington Gore, London SW7.

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Cheques/P.O. should be made payable to the Royal Albert Hall and a stamped addressed envelope should be enclosed when applications for tickets are made.

Beneath the ocean wave

R. C. Vernon on marine biology

An Age of Fishes. By Joy Spozyska. David Charles £3.95. 7153 7023 5.
The Angelfish: Its Life Cycle. By William White. The Oak Tree Press £2.75. 7061 2177 5.
Oddball Fishes and Other Strange Creatures of the Deep. By Braz Walker. The Oak Tree Press £2.75. 7061 2188 0.

Of all the vertebrates, more than 20,000 living species must give the fishes a good claim to be numbered among the most successful. Mrs Spozyska has done them justice in her book which could be read with profit by anybody seeking a broad picture of their biology. It is written in a pleasantly easy style, remarkably free from the technical jargon which such a book might have invited, and deserves careful attention because of the wealth of facts the author has worked into a comparatively short book.

For reference to the Silurian fossil of one of the Cephalopoda,

which was so well preserved that the internal anatomy could be made out as if it was a dissection of a fresh specimen, no doubt hides an exciting story. I can vouch for her observations on electricity in fishes. To see if it really did give a shock I once touched a Torpedo Ray swimming in an aquarium tank. It did.

Anyone with a love of nature will have to resist the temptation to cut out and mount some of the beautiful illustrations by Melchior Spozyska. I am sure that Dr White's book about the Angelfish will find a ready sale among aquarists with whom this fish is a favourite. Illustrated with excellent colour-photographs, it covers in language readily understandable by the non-specialist details of the anatomy and embryonic development. Perhaps one or two line drawings of the anatomical detail might have been useful to the aquarist who is not accustomed to looking at dissections.

It is from such books as Braz Walker's that one picks up those tidbits of information which sometimes make natural history read

more like science fiction. The author specializes on catfishes and could probably make a useful contribution to ichthyology by writing a "formal" book on them. It is a book from which it is easy to quote, but I particularly like the story of the leaffishes of the Antarctic which, because of lack of haemoglobin in their blood, are transparent, giving "the impression that Dracula had been there first". The accounts of the curious and the bizarre make this book entertaining reading.

The Living Ocean. By E. J. Ferguson Wood. Croom Helm £5.50. 0 85665 026 3.

One wonders what the world of literature lost when the late Professor Ferguson Wood turned his attention to marine microbiology. There are comparatively few marine microbiologists, and it is fortunate that a pioneer in this field and a recognized world authority should write in a style which is so compelling. After reading the first two chapters about research at sea and

the equipment used, the reader has the taste of salt in his mouth.

By taking as his subject "any organism which requires a microscope to observe it" it might be thought that, apart from the bacteria, the author had written another book on the marine plankton. It is in fact much more: it is a careful study of the way in which marine micro-organisms "fit into the grand scheme of ocean community dynamics". The student biologist soon learns about the important role microbes play, but this book makes it clear that without them man could not exist: indeed wherever they occur they can be said to exercise a controlling interest in the business of life.

Fish which cultivate luminous bacteria and develop a mechanism for returning the light on and off, and fests of algae growing under the polar pack-ice are but two examples of the fascination of this field of study. The author has read widely into his subject and gives useful references at the end of each chapter. The result is a book which would be a useful addition to any library.

Mapping

Reading Topographical Maps. By A. H. Meux. Hodder and Stoughton £1.60. 0 340 19461 8.
Objective Tests in OS Mapping. By J. C. Aitken and M. J. McGettack. Edward Arnold £1.50. 0 7131 1908 X.

Reading Topographical Maps first appeared in 1950 long before the Ordnance Survey "went metric". This latest edition of Mr Meux's work reflects the changing state of the old 1-inch maps. The basic content of the book remains unaltered and the only revision relates to metrication. Those already familiar with the book will find continuity in their teaching of basic map reading skills; those who have not yet done so will discover a series of exercises and examples supplemented by a general text, illustrating a variety of land forms as they appear on maps, maps, extracts and on oblique photographs. The intention is to cover the map reading syllabus for O level, the fact that this book has now reached its fourth edition indicates its success.

Although Reading Topographical Maps covers a variety of map scales, the new Objective Tests in OS Mapping restricts its approach to the 1/50,000 and 1-inch series. Like the former, it is aimed at O level candidates and lays great stress on map exercises. Obstacles are dealt through the extensive use of multiple choice questions where the possible answers are given to each problem. The text introduces the student to such measures of co-ordination as the "Detour Index" or the "Nodality Index" but the significance and value of such indices are barely explained. The question assumes an O level knowledge of geology and geomorphology, and many aspects of geographical study which though not suitable for self-instruction should nevertheless help to develop powers of observation and deduction and act as a supplement to, rather than a substitute for, direct teaching.

P. P. Dale

Dale and dell

A Dictionary of Geography. By W. G. Moore. Black £5.25. 0 7135 1599 0.

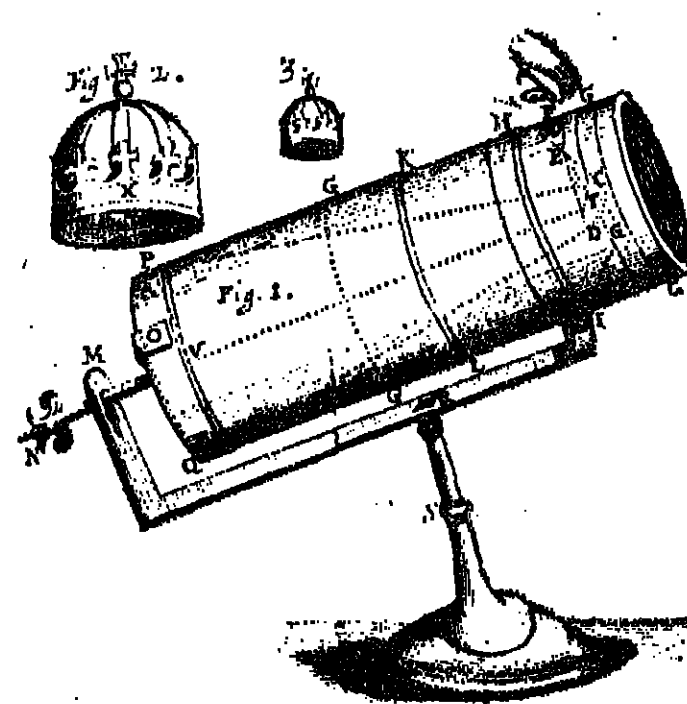
This well-known dictionary was first published by Penguin in 1959. It was published as a hardback in 1967 and now this second edition consists of an updated and enlarged version with metric as well as imperial measurements. There are 50 new entries and although the book is mainly a dictionary of physical geographical terms, it does include related terms in geology, astronomy and associated sciences.

The dictionary is more limited than several of its competitors in the number of entries, the simplicity and austerity of its layout and the omission of some very important aspects. The title is misleading because it implies more than is provided. Other dictionaries have managed to include terms related to human geography and it would have been useful if the book could have done so. However, even limiting criticism to the physical contents still gives plenty of scope. For example, hardly any quantitative terms related to geomorphology are to be found.

There is a quaint and outdated definition of mathematical geography. Words such as bankfull, riffle and point and infiltration are missing; many coastal terms are absent; plate tectonics are mentioned but not defined; the cycle of erosion is perpetuated even so erosion is perpetuated as W. M. D. The great names such as Meade, dingle, gill and glade are given when they are not really necessary.

There is a suspect definition of geography itself and no real reference to environmental aspects and the applied studies both from the physical and human viewpoints; the book has not really been brought up to date.

Bryan Walter



Isaac Newton's first reflecting telescope. This diagram compares the appearance of a weathercock 300 feet distant as seen with the reflector at 38 times magnification with the view from a refractor at 14 times magnification. The length of focus was about 12 inches. The picture is from Isaac Asimov's book "Eyes on the Universe", published by Andre Deutsch £4.95. 2.13 96760 5, in account of the development of the telescope and man's search to comprehend the universe.

Cosmological problems

E. H. Nelson

Astronomy and Cosmology. By Fred Hoyle. W. H. Freeman £8.80. 7167 0351 3.

A student may count himself fortunate indeed to have a course book of this authority and range written for him by one of the

world's leading cosmologists, at a time when technical advances are supplying so much new observational data.

Sir Fred Hoyle brings together a modern understanding of physical processes and of astronomical discoveries to show how physics (as comprehended by man) operates over the vast spatial, temporal and velocity ranges afforded between atomic particles on the one hand and galaxies on the other. Yet it is always made clear that our understanding is far from complete and accurate, since as fast as physics can supply explanations of astronomical phenomena, so new observations throw up more challenging problems.

The range of the book is quite astonishing. The reader will find authoritative accounts of the latest views in quantum physics, gravitation, chemical association and life processes as well as the expected deeply considered expositions of the most profound problems of astronomy and cosmology, among which may be mentioned radiation from neutron stars, black holes, white holes, quarsars, the meaning of red-shift in an expanding universe and, of course, the steady state versus big bang controversy. There is also an account of modern instrumentation in astronomy, but one senses that the author is more at home with theory than with practice in this field.

The book is described as an introductory course and is rightly claimed to require no knowledge of mathematics beyond elementary algebra. But it must not be forced that the treatment is elementary or facile; on the contrary, the deepest of cosmological problems are fairly presented with no concessions to popularity and yet without the requirement of formal training in physics or mathematics. The new student could not fail to be stimulated as well as informed, but any reader with an interest in astronomy or cosmology would find pleasure and profit in the book. Presentation is excellent with 23 colour plates and nearly six hundred illustrations.

Basic Chemistry Data Book. By J. G. Stark. Murray £5.95. 7195 3407 0.

This slim but useful booklet contains all the data one might want at O level: not only the obvious measurements such as boiling points and densities, but also other topographical data on spectra and equilibrium data on

Astronomical

The A-Z of Astronomy. By Patrick Moore. Fontana 70p. 0 00 671101 2.
Astronomy. By David Evans. Teach Yourself Books £1.50. 0 450 15248 6.
Everyman's Astronomy. Edited by R. H. Roy. Dent/Everyman £4.50. 0 460 03024 8.

As well as being one of the oldest sciences, the study of astronomy has probably always been the favourite scientific pursuit of amateurs. The past decade, however, has been characterized by a quite remarkable development in observational astronomical thought, and it is no longer possible to give any satisfying understanding of the subject by merely recommending in general terms the developments of the past three hundred years and adding a brief summary of ancient astronomical achievements in the introductory chapters.

Recent instrumental innovations and observational techniques have brought a flood of new data and theories. These advances demand more thorough treatment than was possible in the popular astronomical books of the first half of the century which were able to summarize then up-to-date topics in a relatively short space. An understanding of historical developments remains important but much greater attention must now be paid to the more recent past; we now see the publication of three new books which are thoroughly revised and rewritten versions of earlier editions.

Patrick Moore's *The A-Z of Astronomy* was originally published a decade ago as *The Amateur Astronomer's Glossary*. In its present up-to-date form, as a modestly priced paperback, it is an undoubted bargain for the enthusiastic amateur who is looking for a compact and convenient source from which to discover the meaning of most of the generally encountered astronomical terms. Such a work can never claim to be complete but it certainly includes many new words and terms that can be unearthed by searching through the index of any general guide to astronomy. School science societies will find it a useful acquisition.

The introduction to Professor David Evans's book in the "Teach Yourself" series acknowledges both the observational developments of the past two decades and also the impact upon the non-specialist of expertly directed television broadcasts which often appear to give the viewer a front seat in the exploration of the universe. Many of these carefully developed and informative programmes give only an illusory impression of understanding, and Professor Evans correctly assesses the need for a text which encourages a more systematic study. Like the first edition of 1952 this book invites the reader to use simply constructed instruments to observe the night skies for himself. It ends with a useful bibliography, glossary and index.

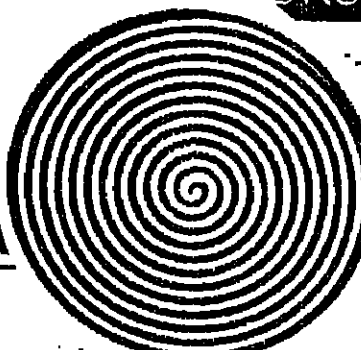
Reverman's *Astronomy* is a worthy successor to *Astronomy for Everyman* which was first published in 1953. It has been completely revised and altered in style, once again, these changes have been brought about by the shifting pattern of astronomical discovery. Whereas the 1953 version was written by a group of leading amateurs of the British Astronomical Association, this new compilation is significantly the work of a team of professional astronomers.

In its present form the book provides an impressively substantial work of reference in compact form. Professor Roy as editor has insisted on the use of SI units, which would have made the book an even more useful school library acquisition. The layout is less attractive and attractive than that sometimes used in general books of astronomy but the thoroughness of treatment simply compensates for this.

The Haber Process. Structure and enthalpy changes are received adequate treatment and a large number of inorganic as well as organic compounds are included. In some tables the type is rather small, S.I. units and modern nomenclature (with older names in parentheses) are used throughout, and the physical quantities quoted are carefully defined.

D. B. Spiers

MAN



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A lucid explanation of the ways in which radiation of all types, and more particularly light, interacts with matter, and the changes produced. There are sections on spectra, colour and waves; the sources and detectors of radiation; lasers; photography; photo-biology and vision.

Published May

What is Energy

Selected Topics in A-level Physics

A. W. WILSON

A completely original treatment of a subject that is fundamental to any real understanding of the physical world or the implications of the energy crisis for future society. The author outlines the usefulness of the concept of energy in many branches of science and seeks to show an underlying unity. Considerable use is made of numerical data, often in the form of charts and diagrams.

Published May

Science Serves Society

G. C. SNED

This unusual book, which suggests experimental work using simple equipment, shows how some of the physical principles taught in O and A level physics can be applied to solve interesting and realistic problems.

Great care and attention has been given to the format and, with the minimum use of text and maximum use of photographs and diagrams, teachers should find it a convenient and easily used teaching resource. This book is a fine catalogue of illustrations and instances in which scientific principles have been employed in meeting a definite human need. School Technology

£1.85

WHEATON

The School Book Division of the Pergamon Group
Henstock Road, Exeter EX2 8RP

Objective geography

Collins Multiple Choice Series
Physical Geography. By R. V. Bryant. Collins 85p. 0 00 32771 8.

The trickle of booklets of multiple choice tests is becoming a larger stream, and this collection of objective tests in physical geography is a useful contribution.

The items are technically sound,

with clear stems and balanced options. Free use is made of diagrams upon which groups of items are based, and the material is correctly pitched at the claimed O level. The author is among the first to point out that among the subsidiary uses of objective tests is their value in stimulating class discussion of the correct answers. Items based on pictures would have been a valuable, but expensive, addition.

B.S.R.

Related to reality

B. S. Roberson on soil

The Soil: An Introduction to soil study in Britain. By F. M. Courtney and S. T. Trudgill. Edward Arnold £3.25. 0 7131 1987 X.

The authors modestly apologize for adding to the number of books on soil. They need not have done. This is written by teachers who know their subject but who can also present it in an attractive, simple, yet not simplified way.

It is a relief to read a book on soil which does not plunge immediately into definitions of horizons, which are wisely left until chapter three. Instead we are first told what soil is, its properties, and its internal mechanisms. Chapter four places soils in the ecosystem, in a notion of the ecosystem for the uninitiated. Chapter five on soil management stays practical and is

related to reality. The book is not overburdened with soil classification, but when this does appear in the final chapter the going becomes heavy.

A great strength of this book is the way in which the authors have handled the necessary knowledge of physical sciences. Although a good deal of chemistry, biology, and physics is involved it is written in clear terms and the reader is not blinded by science. The diagrams are generous and well drawn, and the material is taken solely from examples available in this country. There is much useful information in the book, though little field work through-out. Though little specific reference to it, the book is offered to sixth forms, colleges of education, first year undergraduates and teachers. Few sixth formers will need this degree of detail, but the teacher who studies it will have an informed audience.

Fossil facts

Harold Appleton on geology

Introducing Geology Series, No. 1
Fossils. By F. A. Middlemiss. Allen and Unwin £1.35. 04 560005 8.

This book is a companion to the series, *Stratigraphy*, by the same author, who is an acknowledged authority in these fields. It is difficult for one totally engaged in work at university level to appreciate the reading and comprehension limitations of the Middlemiss line, however, managed to condense into about 60 pages a vast amount of information, well up to O level standard, yet in a

reasonably easily readable form. After sections describing the nature of fossils, fossils as rock builders, and a brief outline of the way living things are classified, each main fossil group is given a separate section. There are also short sections on vertebrates and plants. The final sections of the book deal with environmental factors, dating, and distribution. It is good to see useful sections explaining why fossils are so important to the geologist.

There is a glossary and a comprehensive index, and the book is well illustrated with a few photographs and many beautifully drawn, well labelled diagrams.

More than a summary

D. B. Spiers

O Grade Chemistry: Essential Facts and Theory. By R. A. Roberts. Edward Arnold £1.50. 7131 1942 X.

The book is aimed at the Scottish O Grade syllabus, and concentrates mainly on bond, ionic theory, and the chemistry of sulphur, nitrogen and organic compounds. Topics which are covered in some detail (for example, the concept of electron transfer and organic chemistry) are clearly treated, but in other cases they are not. In clarity, possibly because the book is regarded mainly as a revision text, it is not as good as the more recent *Chemistry for O Grade* by R. A. Roberts. In one of two cases

the approach is misleading: for example, on first mention, only two atoms appear to be involved in ionic bonding, and there is a puzzling diagram of the carbon cycle. There are a few instructions for laboratory work, but the results of experiments are given and related to theory.

The presentation is good, with neatly drawn diagrams, clear printing, and virtually no misprints. There are a few revision questions at the end of chapters. Nomenclature and units are generally up-to-date, though the mole is defined as 1 gram formula mass. Data are presented on two rather cramped periodic tables, and there is a list of electrode potentials, though this concept does not appear in the body of the book.

*REASONS FOR CHOOSING UNDERSTANDING BIOLOGY

AN EXCITING NEW O LEVEL TEXT BOOK

Barbara E. Archer, BSc Forest Fields College, Nottingham
Margaret Jago, BSc MI Biol Malvern Girls' College
H. W. Grenville, MSc, MI Biol C. D. Johnson, BSc Repton School, Eeclesbourne School, Duffield
Consulting Editor: M. K. Smids
Lecturer in Education, University of Nottingham

* A comprehensive text, incorporating the authors' Nuffield experience: to suit modern O level biology syllabuses, as well as 6th form courses for CBE students.

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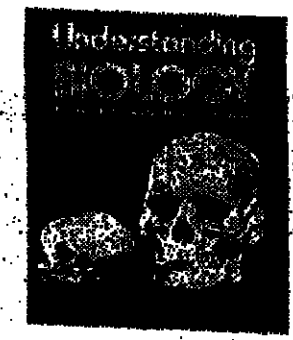
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THE AUTHORS' AIM

is to provide a guide to biological studies for examination candidates but perhaps more importantly to present the subject in such a way that young people will find their interest in biology reaching beyond the examination.

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Pure and applied

Shirley Meek on O and A level chemistry

Core Chemistry. By Dennis Garvie, John Field and Anne Robertson. Oxford University Press £2.50. 0 19 514033 3.

This book has been written to cover the Ordinary Grade Chemistry syllabus of the Scottish Certificate of Education. Its layout is particularly clear and readable, and the diagrams are easily understood. Each chapter ends with concise lists of facts to be learned, and a selection of questions from past SCE papers.

A series of experiments are included, not in the main body of the text but collected together in a separate section at the end of the book. There are several interesting experiments in the field of electrochemistry, notably those which demonstrate methods to monitor the course of different chemical reactions. This reflects the emphasis placed by the authors on the close relationship between chemical change and the movement of electrons, which produces very clear and useful sections on corrosion, redox reactions and the electrochemical series.

An electron cloud model is used throughout to explain the formation of chemical bonds, ionic bonds

being introduced as a limiting case of polar covalent bonding. This approach, although it results in more complex diagrams than the familiar "dot and cross" models, should certainly be of help to pupils who continue their study of chemistry to a more advanced level.

Although Core Chemistry has been written primarily with the Scottish O-Grade examination in mind, it is suggested that it will also be of use to those studying the various GCSE level chemistry courses. But it cannot really be recommended for this, as several important topics are either missing or are touched upon only briefly. Among others, there is no discussion of factors influencing rates of reaction, there is little thermochemistry, and there are no calculations involving the volumes of gases.

Multiple Choice Tests in Basic Chemistry. By J. H. Taylor, B. P. Bourne and R. W. Thomas. Whetton 65p. 08 019714 0.

Structural Questions in Advanced Level Chemistry. By Robin A. H. Hillman, Michael C. V. Cane and Colin T. MacCarthy.

Rock bottom

John Brooks on geology

Petroleum and the Continental Shelf of North-West Europe. Volume One: Geology. Edited by A. W. Woodland. Applied Science Publishers £16.00. 0 5134 6485.

Although announcements in the press by oil companies of new oil and gas discoveries in the North Sea seem to occur with increasing regularity, information relating to the actual geology of these finds, and of the many more "dry" holes

Heinemann Educational Books £1.30. 0 435 63098 X.

Multiple Choice Tests in Basic Chemistry provides 100 objective questions designed to test the pupil's knowledge of material covered in Stage 1 of the Nuffield O Level sample scheme. Although, as the authors state, the material covered is that found in most introductory chemistry courses, many of the questions seem to require this material to have been taught in precisely the manner set out in the Nuffield scheme. It seems a pity that this course, designed originally to stimulate a spirit of discovery, should have inspired a series of rather traditional restructuring questions.

Advanced Level Chemistry, however, shows the true Nuffield approach throughout. Here are 78 sets of questions, based indeed on the various topics of the Nuffield A level course, but which range widely into many branches of pure and applied chemistry. Much excellent material is included which is not usually found in A level textbooks, and while some questions are easy, others will fully stretch our most able pupils.

Structural Questions in Advanced Level Chemistry, by Robin A. H. Hillman, Michael C. V. Cane and Colin T. MacCarthy, has not been generally available. Last November a conference was held in London to review the developments that have taken place in the exploration and exploitation of the North West European Continental Shelf, and just recently the proceedings of this conference were published. The papers given at the conference, and in the book, range from regional compilations of structure and geology to detailed accounts of oil and gas fields. A review paper by Kent describes the scene and the first papers describe the geology and hydrocarbon potential of the sedimentary basins west of the United Kingdom, and including South Western Approaches, the Celtic Sea, Irish Sea, Humber and Rockall-Faroe areas. Apart from the Irish Sea, very little well information is available in these areas, and consequently the evidence presented is largely based on geophysical observations.

As for the North Sea, the Norwegian part of the continental shelf is described, and the precursor to the United Kingdom side, suggestions for a common nomenclature for southern North Sea geology is presented. There then follows a series of papers dealing in turn with each of the formations present in the area commencing with the Permian (Kroklenged), and "younging to the end of the book". It may not be generally realized that hydrocarbons have been found from almost every major formation from the Carboniferous to the Tertiary, taking into account land areas, and fields (six gas and eight oil) from the nine major stratigraphic formations over five systems are described in great detail and each paper is written by the oil company who originally discovered the accumulation. Every one is illustrated by diagrams, maps and cross-sections giving a very clear picture of the subsurface geology. By way of complete contrast there are also two papers on volcanic activity, one from the Jurassic and one from the Tertiary formation.

This is an inexpensive volume which libraries and teachers of geology might care to know about. Its content is broad and its dimension to the already well known land areas, and provides considerable supplementary data for stratigraphy and regional geological studies as well as for structural geology, even at an elementary level. Since all the papers can be made of the information in the papers, in geology curriculum both as project items, and as cases for discussion in integrated courses as well as giving teachers a "hit-off" glimpse of offshore areas.

Selected Experiments in 'A' Level Chemistry. By J. GUNNELL AND E. JENKINS. Over 150 questions are skillfully employed in testing the student's understanding of the subject rather than just his recall of information. The text has been arranged with both the teacher and student in mind and its 15 sections deal with topics based on the principles underlying all 'A' level syllabuses. SI units are used throughout and nomenclature follows the recommendations of both the ASE publication 'Chemical Nomenclature, Symbols and Terminology' and the IUPAC conventions. Question Book 95p. Answer Book £1.05.

Together with Objective Questions and Structured Questions at 'A' level by the same authors, this book provides abundant theoretical and practical chemistry to supplement any textbook course. The range of experiments (over 400) is more than adequate for most Advanced Level courses and each experiment, or group of experiments, contains a number of questions designed to provoke thought and discussion. £3.25.

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Steps to truth

T. H. Price on fundamental chemistry

Chemistry Decoded. By T. H. Price. Oxford University Press £9.50. 0 19 514033 3.

Complete standardization of our educational courses is still some way off, in spite of the creeping tendencies arising from common examination syllabuses. Schools Council projects and similar developments. And the variations we experience and even enjoy are constantly reflected in the textbook scene. The style of presentation alters though the content may show a degree of constancy.

The intriguing title of this book gives some clue to its significance. Too many texts assume that everyone understands that there is a body of knowledge to which the student has to be introduced, whatever the variation of method. Chemistry Decoded is basically a reminder about fundamentals.

The accumulation of facts about the earth's crust, which we call chemistry, is, after all, a task involving the construction of a language and the formulation of a framework. As our perception widens and deepens we need to alter, modify and reconstruct the framework. Absolute truth remains beyond our reach but we continue to make steps, some minute and hesitant, some large and determined, and by these efforts achieve an increasing control over the environment. This, then, is the thesis on which the book is built. Such a timely reminder serves to enable the student to acquire and maintain a synoptic view of the subject.

This unusual approach is seen in the introduction to each chapter each of which begins with a statement of "Perceptions and Deceptions". Here is an attempt to face up to and define the dilemma which the student teacher of chemistry at some stage.

Does one present "the more correct but more complicated law, or should one first use slightly less correct but simpler laws?"

New look

Peter Huw Morgan on physics

The Physical World (third edition). Volume 1 Mechanics, Volume 2 Heat, Energy and Waves, and Volume 3 Electricity, Magnetism and Atomic Structure. By H. J. P. Keighly and F. R. McKinn. Whetton 65p. 08 019714 0.

Volume 1, Mechanics, Volume 2, Heat, Energy and Waves, and Volume 3, Electricity, Magnetism and Atomic Structure. By H. J. P. Keighly and F. R. McKinn. Whetton 65p. 08 019714 0.

This is the third edition of this established O level text, updated with the inclusion of new diagrams and plates. The new layout gives a pleasant open look to the material and the three volumes maintain the clear practical approach in the new edition. The two-colour text is rarely silted and reads easily, reserving the second colour for highlighting definitions and physical principles; abundant half-tone plates illustrate these principles by reference to everyday things. There is an appendix devoted to graphs and experimental errors, and the chapters are separately equipped

Bacteria and protozoa

Micro-Organisms. By J. Williams and M. Shaw. Mills and Bon £2.25. 263 06104 3.

This new little book introduces the various micro-organisms and attempts to point out the colossal dimension to the already well known land areas, and provides considerable supplementary data for stratigraphy and regional geological studies as well as for structural geology, even at an elementary level. Since all the papers can be made of the information in the papers, in geology curriculum both as project items, and as cases for discussion in integrated courses as well as giving teachers a "hit-off" glimpse of offshore areas.

The early chapters discuss the different micro-organisms. Unfortunately the algae are represented here only by the blue-green, and these receive relatively scant attention. Better treatment is accorded to the bacteria and protozoa, their

honest lessons which do require the more difficult ideas. To illustrate the point the book concentrates on some theory and traces in a development from the Greek ideas to the present concepts. This is very much the historic method of teaching, which has for long had a place in the teaching but is now under due futuristic presentation of the latest ideas. No easy solution is offered to the basic solution. Sometimes it is resolved in favour of the new, sometimes the older prevails. Emphasis throughout is on a dynamic approach. "We learn as we go," with appropriate attention to scientific method.

The arresting style of the book is maintained by unusual headings, some of the chapters. "The reality of atoms" is a particularly striking example. The book is a well thought out and carefully planned work, and it is a pleasure to find it so well presented. The book is a well thought out and carefully planned work, and it is a pleasure to find it so well presented.

Each chapter concludes with a set of questions to test and pupils to solve, both papers and diagrams as well as the diagrams and reproductions of illustrations.

The book does not fit easily into the English scene, designed as it is primarily for use in the United States but it would make a most attractive addition to a library for sixth form use and as a text for those about to start a chemistry course at sixth form level.

SECONDARY

continued from page 38

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The Crofton School, Crofton, Devon. Applications for September, 1976, to be sent to the Headmaster, Crofton School, Crofton, Devon. The school is a day school for boys and girls, with a boarding house for boys. The school is a day school for boys and girls, with a boarding house for boys.

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DEVON
CROFTON (Devon) (

REQUIRED FOR SEPTEMBER, 1976

Scale 1.
To teach Metalwork, Woodwork and Technical Drawing
with special emphasis on Metalwork to C.S.E., G.C.E.
"O" and "A" level.
Application forms (quoting reference) to be returned

to the Rev. J. Murphy, St. Mary's Presbytery, Dodge Hill, Heaton Norris, Stockport, by 28th June, 1978.

Stockport School, Mile End Lane, Stockport.
TEACHER OF PHYSICS/MATHEMATICS
(Ref. 237/TES)
Scale 1.

Priestnall School, Priestnall Road, Heaton Mersey.
TEACHER OF GENERAL SCIENCE
(Ref. 236/TES)
Scale 1.
To teach this subject to "O" level, with possibly "O" level Biology also.

Peel Mount School, Buckingham Road, Heaton Chapel
TEACHER OF ENGLISH/HISTORY
(Ref. 233/TES)
Scale 1.
 Graduate, primarily to teach English to all age groups.
 Including external examination work. Ability to offer
 history as a 2nd subject would be an added advantage.

Marple Hope High School, Hobart Lane, Marple.
TEACHER OF PHYSICAL EDUCATION
(Ref. 231/TES)
Scale 1.
To join a group of nine in the Faculty of Recreation. The school facilities include new sports hall, gymnasias, 3 hockey pitches, 3 soccer pitches and rugby pitch. A person appointed must have the ability to teach most of the major and minor games but special interests in basketball, badminton and gymnastics would be an advantage.

Brondway School, High Grove Road, Chesdale.
TEACHER OF MATHEMATICS
(Ref. 230/TES)
Scale 1.

To join a well organised department in this rapidly expanding school. Ability to teach modern mathematics is essential.

Choadle Hulme High School, Woods Lane, Choadle Hulme.

TEACHER FOR TECHNICAL SUBJECTS
(Ref. 229/TES)

Scale 1.

To teach Technical Drawing to C.S.E. level with either Metalwork or Woodwork. Excellent facilities.

Gay Bank School, The Falway, Otterton.

TEACHER OF CRAFTS (Ref. 228/TES)

Scale 1.

There are two craft units, one in Lower School and

one in Upper, opening opportunities for woodwork
Metalwork with some Technical Drawing.

TEACHER OF ART (Ref. 227/TES)

Scale 1.

The Department offers a range of special skills al-
though graphics would be preferred, other skills
be accommodated. There are craft units in Upper,
Lower school with additional art rooms in middle
building.

REQUIRED FOR JANUARY, 1977.

St. Michael's R.C. School, Nantgrave Road, Heaton Mersey.
TEACHER OF HISTORY AND RESPONSIBILITY FOR THE SCHOOL LIBRARY (Ref. 232/TES).
Scale 2.
 The teacher will teach mainly pupils in the age range 11-14. A temporary teacher for September, 1978, Scale 1, will be considered.
 Application forms to be returned (quoting reference number) to: The Presbytery, St. Peter's R.C. Church, Glean Lane, Hazel Grove, Stockport, by 28 June, 1978.

Priestnall School, Priestnall Road, Heaton Mersey.

TEACHER OF MATHEMATICS
(Ref. 235/TES)
Scale 2.
To teach to C.S.E., "O" and "A" level; S.M.P. level and S.I.T. group statistics. An interest in Computer Studies would be a recommendation.
(Temporary appointment, Scale 1, from September would be considered.

Application forms for all posts from the Director of Education, Town Hall, Stockport (quoting reference to be related to the Head Teacher, unless otherwise stated, by 28th June, 1976.

Mid Glamorgan COUNTY COUNCIL

LECTURING/TEACHING STAFF

Required for September, 1976 or as soon as possible thereafter

CYNON VALLEY DISTRICT

COMPREHENSIVE SCHOOL

MOUNTAIN ASH

1. Teacher qualified to teach COMMERCIAL SUBJECTS (Accounts, Shorthand and Typewriting) to at least C.S.E. and 'O' level standards. Scale 1.
2. Teacher qualified to teach ENGLISH, to teach the subject in the Upper School and in the Lower School at Aberdare. Scale 1.
3. Graduate in, or teacher qualified to teach, MATHEMATICS 'O' and 'A' level work for a suitable candidate. Scale 1.
4. Teacher qualified to teach MATHEMATICS. Willingness to offer some Physics an advantage. Scale 1.

SECONDARY SCHOOL

RHYDYWAUN, Aberdare

Teacher qualified to teach ENGLISH, mainly in the lower forms. Ability to assist with Drama would be an advantage. Scale 2 post for an experienced teacher but applications will also be considered from new entrants for a Scale 1 post.

PRIMARY SCHOOLS

CWMBACH JUNIOR

Qualified teacher, Junior trained, able to assist with BOYS' GAMES and PHYSICAL EDUCATION. Ability to teach Welsh as a second language and to play the piano essential. Scale 2 post.

GLENBOI PRIMARY, Mountain Ash

Qualified teacher, Junior trained, to assist with BOYS' GAMES and PHYSICAL EDUCATION. An ability to teach Art and Craft desirable. Temporary post for one year. Scale 1.

PENGEULAN PRIMARY, Mountain Ash

Qualified teacher, Nursery/Infant trained. Ability to play the piano desirable. Scale 1.

YSOGOL GYNRADD GYNRAEG, Aberdare

Qualified teacher, Infant trained, to teach through the medium of Welsh. Ability to play the piano desirable. Scale 1.

Application forms, to be returned by 30th June, 1976, obtainable on receipt of a stamped addressed foolscap envelope, from the District Education Officer, District Education Office, Old Boys' Grammar School, Aberdare.

MERTHYR DISTRICT

COMPREHENSIVE SCHOOL

CYFARTHFA, Merthyr Tydfil

Teacher qualified to teach MATHEMATICS, to teach to 'O' and 'A' levels. The successful candidate will rank as second in the Mathematics Department. Scale 2 post.

PRIMARY SCHOOL

YNYSBOWEN JUNIOR

Teacher qualified to teach GENERAL SUBJECTS and able to assist with Boys' Physical Education and Games. Scale 1.

SPECIAL EDUCATION

Peripatetic Remedial Teachers

Qualified teachers who have successfully pursued a one-year course in the teaching of handicapped pupils. Applications from experienced, qualified teachers without the one-year course will be considered for a temporary appointment, but such a teacher may not be employed for more than one year unless he/she undertakes to attend such a course. Scale 1.

Special Class allowance of £351 and, where appropriate, a merit award, will be payable.

Application forms, to be returned by 30th June, 1976, obtainable on receipt of a stamped addressed foolscap envelope, from the District Education Officer, District Education Office, Pontfryn, Merthyr Tydfil.

OGWR DISTRICT

COLLEGE OF TECHNOLOGY

BRIDGEND

DEPARTMENT OF MECHANICAL ENGINEERING AND MINING

LECTURER, GRADE 1, in WOOD TRADES required to teach slow learners in the College Industrial Unit at Bridgend Industrial Estate.

The successful applicant will be responsible for setting and marking assignments and supervising their operation, and other production tasks.

Applicants must possess a City and Guilds Advanced Craft Certificate in Wood-machining and have good industrial experience.

Employment post for one year.

Salary: £2,489 p.a. (1975) x £144 (8) = £4,377, plus the 1976 Salary Award of £312 per annum.

COMPREHENSIVE SCHOOLS

MAESTEG

1. Graduate in, or teacher qualified to teach, ENGLISH to C.S.E. level. Scale 1.
2. Teacher qualified to teach TECHNICAL DRAWING to C.S.E. and 'O' levels. Possibility of Sixth Form teaching. Scale 1. Temporary post for one year.

PENCOED, nr. Bridgend

Teacher qualified to teach TYPEWRITING, SHORTHAND and OFFICE PRACTICE to C.S.E. level, and also to teach General Subjects. Ability to assist with Games an advantage. Scale 1.

YNYSAWDE, Tendu, Bridgend

Graduate in, or teacher qualified to teach, CHEMISTRY, to teach the subject up to 'O' level. Sixth Form work for a suitable candidate. Scale 1.

PRIMARY SCHOOLS

BLAENGARW JUNIOR, Pontypridd

Qualified teacher, Junior trained, with ability to teach NEEDLEWORK and GIRLS' GAMES. Scale 1.

CWMFELIN PRIMARY, Maesteg

Qualified teacher, Junior trained, with ability to teach BOYS' GAMES. Scale 1.

CAERAU NURSERY, Maesteg

Qualified teacher, Nursery/Infant trained. Scale 1.

FROWNEY PRIMARY, Ogmore Vale, nr. Bridgend

Qualified teacher, Infant trained; experience with Reception Class pupils desirable. Scale 1.

OLDCASTLE INFANTS', Bridgend

Qualified teacher, Nursery/Infant trained, with ability to play the piano desirable. Scale 1.

PANDY'R BETTWS INFANTS', Bettws, Bridgend

Qualified teacher, Infant trained; ability to play the piano essential. Scale 1.

ST. MARY'S R.C. PRIMARY, Bridgend

Qualified teacher, Infant trained, to teach Religious Education. Ability to play the piano an advantage. Scale 2 post for an experienced teacher but applications will be considered from new entrants for a Scale 1 post.

Application forms, to be returned by 30th June, 1976,

obtainable on receipt of a stamped addressed foolscap envelope, from the District Education Officer, District Education Office, Sunnyside, Bridgend.

RHYMEY VALLEY DISTRICT

COMPREHENSIVE SCHOOLS

BEDWELLY

Graduate in MATHEMATICS, to teach the subject up to and including 'O' level. Possibility of 'A' level work in the future. Ability to teach Statistics would be an advantage. Scale 1.

HEOLDDU, Bargod

(SOCIAL PRIORITY ALLOWANCE PAYABLE)

1. Graduate in, or teacher qualified to teach, ENGLISH, Scale 1.

2. Two Candidates qualified to teach in the following subject combinations:

- (i) ENGLISH AND WELSH
- (ii) FRENCH AND GERMAN.

Ability and willingness to assist with Games or Physical Education, generally, will be a recommendation in each case. Scale 1 posts.

LEWIS BOYS', Penganm

HEAD OF MATHEMATICS DEPARTMENT.

Graduate in MATHEMATICS, to be responsible for the organization of the subject throughout the school, and to teach to 'A' and 'S' levels. Scale 3 post.

ST. MARTIN, Caerphilly

Teacher qualified to teach TECHNICAL DRAWING to 'A' level, with C.S.E. work in Motor Vehicle and Building, and to assist with Junior Metalwork. Scale 1.

Application forms, to be returned by 30th June, 1976,

obtainable on receipt of a stamped addressed foolscap envelope, from the District Education Officer, District Education Office, Council Offices, Ystrad Mynach, Hengoed.

TAFF-ELY DISTRICT

COMPREHENSIVE SCHOOLS

COED-Y-LAN, Pontypridd

Teacher qualified to teach MUSIC. The successful applicant will also be required to assist in the teaching of English. Scale 1.

HAWTHORN, Pontypridd

Teacher, qualified to teach GEOGRAPHY to 'O' and C.S.E. levels. Scale 1.

TONYREFAIL, Penrh

(SOCIAL PRIORITY ALLOWANCE PAYABLE)

Teacher qualified to teach GENERAL SUBJECTS to a third year class in the lower ability range. Ability to assist to a limited extent in the teaching of Geography in the Lower School would be a recommendation. Scale 1.

SUPPLY TEACHING

Two experienced qualified teachers required for permanent supply teaching, to take the place of teachers absent for in-service training or other causes. Travelling expenses are payable. Scale 1 posts initially, but Scale 2 after completion of two years service in such a post.

Application forms, to be returned by 30th June, 1976, obtainable on receipt of a stamped addressed foolscap envelope, from the District Education Officer, District Education Office, The Grange, Tylfa Road, Pontypridd.

SPECIAL EDUCATION

SCHOOL PSYCHOLOGICAL CENTRE, Merthyr Tydfil

Qualified teacher who has successfully pursued a one-year course in the teaching of handicapped pupils, for appointment as ADVISORY REMEDIAL TEACHER/HOME VISITOR. Scale 3 post.

Application forms, to be returned by 30th June, 1976,

obtainable on receipt of a stamped addressed foolscap envelope, from the Director of Education, Education Department, County Hall, Calheys Park, Cardiff.

J. L. BRACE, Director of Education.

SECONDARY

Scale 1 Posts continued

NORFOLK

TEACHER, GRADE 1, in WOOD TRADES required to teach slow learners in the College Industrial Unit at Bridgend Industrial Estate.

The successful applicant will be responsible for setting and marking assignments and supervising their operation, and other production tasks.

Applicants must possess a City and Guilds Advanced Craft Certificate in Wood-machining and have good industrial experience.

Employment post for one year.

Salary: £2,489 p.a. (1975) x £144 (8) = £4,377, plus the 1976 Salary Award of £312 per annum.

COMPREHENSIVE SCHOOLS

MAESTEG

1. Graduate in, or teacher qualified to teach, ENGLISH to C.S.E. level. Scale 1.

2. Teacher qualified to teach TECHNICAL DRAWING to C.S.E. and 'O' levels. Possibility of Sixth Form teaching. Scale 1. Temporary post for one year.

PENCOED, nr. Bridgend

Teacher qualified to teach TYPEWRITING, SHORTHAND and OFFICE PRACTICE to C.S.E. level, and also to teach General Subjects. Ability to assist with Games an advantage. Scale 1.

WARWICK

Scale 2 and above

AVON COUNTY

AVON VALLEY SPECIAL SCHOOL

Qualified teacher, Junior trained, with ability to teach NEEDLEWORK and GIRLS' GAMES. Scale 1.

CWMFELIN PRIMARY, Maesteg

Qualified teacher, Junior trained, with ability to teach BOYS' GAMES. Scale 1.

CAERAU NURSERY, Maesteg

Qualified teacher, Nursery/Infant trained. Scale 1.

FROWNEY PRIMARY, Ogmore Vale, nr. Bridgend

Qualified teacher, Infant trained; experience with Reception Class pupils desirable. Scale 1.

OLDCASTLE INFANTS', Bridgend

Qualified teacher, Nursery/Infant trained, with ability to play the piano desirable. Scale 1.

PANDY'R BETTWS INFANTS', Bettws, Bridgend

Qualified teacher, Infant trained; ability to play the piano essential. Scale 1.

ST. MARY'S R.C. PRIMARY, Bridgend

Qualified teacher, Infant trained, to teach Religious Education. Ability to play the piano an advantage. Scale 2 post for an experienced teacher but applications will be considered from new entrants for a Scale 1 post.

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RHYMEY VALLEY DISTRICT

COMPREHENSIVE SCHOOLS

BEDWELLY

Graduate in MATHEMATICS, to teach the subject up to and including 'O' level. Possibility of 'A' level work in the future. Ability to teach Statistics would be an advantage. Scale 1.

HEOLDDU, Bargod

(SOCIAL PRIORITY ALLOWANCE PAYABLE)

1. Graduate in, or teacher qualified to teach, ENGLISH, Scale 1.

2. Two Candidates qualified to teach in the following subject combinations:

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Ability and willingness to assist with Games or Physical Education, generally, will be a recommendation in each case. Scale 1 posts.

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J. L. BRACE, Director of Education.

WARWICK

Scale 2 and above

AVON COUNTY

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Applicants must possess a City and Guilds Advanced Craft Certificate in Wood-machining and have good industrial experience.

Employment post for one year.

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RHYMEY VALLEY DISTRICT

COMPREHENSIVE SCHOOLS

BEDWELLY

Graduate in MATHEMATICS, to teach the subject up to and including 'O' level. Possibility of 'A' level work in the future. Ability to teach Statistics would be an advantage. Scale 1.

HEOLDDU, Bargod

(SOCIAL PRIORITY ALLOWANCE PAYABLE)

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- (i) ENGLISH AND WELSH
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Ability and willingness to assist with Games or Physical Education, generally, will be a recommendation in each case. Scale 1 posts.

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Application forms, to be returned by 30th June, 1976,

obtainable on receipt of a stamped addressed foolscap envelope, from the District Education Officer, District Education Office, Council Offices, Ystrad Mynach, Hengoed.

St. Helens College of Technology

PRINCIPAL (Group 7)

Applications are invited from graduates or holders of equivalent qualifications who have considerable experience of Further Education in a senior post.

Application forms and further details may be obtained from the Director of Education, Education Department, Century House,

Hardshaw St., St. Helens, Merseyside WA10 1RN.
Closing date: 5th July, 1976



Matthew Boulton Technical College, Sharnock Street, Birmingham B5 7DB

APPOINTMENT OF VICE-PRINCIPAL

Applications are invited from professionally qualified persons possessing extensive experience in a senior post in Further Education for appointment to the post of Vice-Principal which becomes vacant when the present Vice-Principal retires from service on 31st August, 1976.

Salary will be in accordance with the Scales of Salary for Teachers in Further Education, 1975-Group 7—£9,763.

Application forms and further particulars of the post obtainable from the Principal to whom completed forms should be returned by not later than Friday, 2nd July, 1976.

There is a scheme for assistance with removal expenses.

BIRMINGHAM



BIRKENHEAD COLLEGE OF TECHNOLOGY

Appointment of VICE-PRINCIPAL

Applications are invited for this post (Group 6), as from 1st January, 1977.

Application forms and further particulars from the Director of Education, Metropolitan Offices, Cleveland Street, Birkenhead, Merseyside, to be returned by 21st July, 1976.

Full Time Teaching Vacancy

DEPARTMENT OF SCIENCE

LECTURER I

in MATHEMATICS with some PHYSICS to commence as soon as possible.

Application form from the Principal, Birkenhead College of Technology, Borough Road, Birkenhead, Merseyside, to be returned by 2nd July, 1976.

Hampshire Education Authority

Highbury Technical College

Portsmouth

2 Lecturers Grade 1

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INDEPENDENT Schools continued

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UNIVERSITIES Appointments continued

LANCASTER
THE UNIVERSITY
DEPARTMENT OF
EDUCATIONAL RESEARCH

Applications are invited from men and women for the post of Lecturer in Educational Research. The post will be for two years. The salary scale is £3,174 to £5,174 p.a.

Further particulars may be obtained from the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW. Applications should be sent to the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW, not later than 20 July 1978.

LONDON
UNIVERSITY OF
GOLDSMITHS COLLEGE
SCHOOL OF EDUCATION
AND SOCIAL STUDIES
COURSES
LECTURER IN SENIOR

Applications are invited from men and women for the post of Lecturer in Senior Education. The post will be for two years. The salary scale is £3,174 to £5,174 p.a.

Further particulars may be obtained from the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW. Applications should be sent to the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW, not later than 20 July 1978.

LONDON
THE UNIVERSITY
INSTITUTE OF EDUCATION

Applications are invited from men and women for the post of Lecturer in Education. The post will be for two years. The salary scale is £3,174 to £5,174 p.a.

Further particulars may be obtained from the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW. Applications should be sent to the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW, not later than 20 July 1978.

LONDON
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INSTITUTE OF EDUCATION

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since in schools and an interest in research in music education. There will be opportunities to participate in research and to contribute to the development of the music curriculum in schools.

The salary scale for Lecturers is £3,174 to £5,174 p.a. plus superannuation. Further particulars may be obtained from the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW. Applications should be sent to the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW, not later than 20 July 1978.

LOUGHBOROUGH
UNIVERSITY OF TECHNOLOGY
CHAIR IN PHYSICAL
EDUCATION AND RECREATION

The University is expanding its physical education and recreation facilities. The Chair in Physical Education and Recreation is a new post created to lead and develop the physical education and recreation programme in the University.

The salary scale for the Chair is £5,174 to £7,174 p.a. plus superannuation. Further particulars may be obtained from the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW. Applications should be sent to the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW, not later than 20 July 1978.

The University is expanding its physical education and recreation facilities. The Chair in Physical Education and Recreation is a new post created to lead and develop the physical education and recreation programme in the University.

The salary scale for the Chair is £5,174 to £7,174 p.a. plus superannuation. Further particulars may be obtained from the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW. Applications should be sent to the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW, not later than 20 July 1978.

SUDAN
THE UNIVERSITY
OF KHARTOUM

Applications are invited from men and women for the post of Lecturer in Education. The post will be for two years. The salary scale is £3,174 to £5,174 p.a.

Further particulars may be obtained from the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW. Applications should be sent to the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW, not later than 20 July 1978.

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**Colleges of
Higher Education**

BURFORDSHIRE
EDUCATION SERVICE
NEIGHAM COLLEGE
OF HIGHER EDUCATION

Applications are invited for the post of Lecturer in Education. The post will be for two years. The salary scale is £3,174 to £5,174 p.a.

Further particulars may be obtained from the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW. Applications should be sent to the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW, not later than 20 July 1978.

ESSEX
CHELSEA INSTITUTE
OF HIGHER EDUCATION

Applications are invited for the post of Lecturer in Education. The post will be for two years. The salary scale is £3,174 to £5,174 p.a.

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WEST SUSSEX
UNIVERSITY OF SUSSEX
COLLEGE OF EDUCATION

Applications are invited for the post of Lecturer in Education. The post will be for two years. The salary scale is £3,174 to £5,174 p.a.

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Adult Education

LONDON
TULIAN AND SCOTT
EDUCATION INSTITUTE

Applications are invited for the post of Lecturer in Education. The post will be for two years. The salary scale is £3,174 to £5,174 p.a.

Further particulars may be obtained from the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW. Applications should be sent to the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW, not later than 20 July 1978.

THE OPEN UNIVERSITY
POST-GRADUATE COURSES

Applications are invited for the post of Lecturer in Education. The post will be for two years. The salary scale is £3,174 to £5,174 p.a.

Further particulars may be obtained from the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW. Applications should be sent to the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW, not later than 20 July 1978.

SOUTHAMPTON
UNIVERSITY OF SOUTHAMPTON
COLLEGE OF EDUCATION

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**Community Homes
and Associated
Institutions**

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Assessment Centres

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**Youth and
Community Service**

DERBYSHIRE
COUNCIL OF EDUCATION

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Slough College of Higher Education

SCHOOL OF ENGINEERING
LECTURER II IN PLANT AND
PROCESS ENGINEERING

Applications are invited for an appointment to teach in HNC/D, CGLI Pt III Technician courses and TEC equivalent.

Applicants should be graduates or equivalent and able to offer specialist subjects in Plant and Process Engineering which could include:

- Terotechnology; Works Services;
- Heat Generation; Condition Monitoring;
- Energy Conservation

Salary will be in the range £3279 - £5493 + £141 p.a. Local Allowance + £312 p.a. Supplementary Payment.

Further details and application forms can be obtained from the Vice Principal, Slough College of Higher Education, Wellington Street, Slough, Berks SL1 1YG to whom they should be returned before 2 July 1978.

**Fellowships
Studentships and
Research Awards**

NEWCASTLE UPON TYNE
THE UNIVERSITY
JUNIOR RESEARCH
ASSOCIATE

Applications are invited from graduates in Humanities or Sciences for the post of Junior Research Associate. The post will be for two years. The salary scale is £3,174 to £5,174 p.a.

Further particulars may be obtained from the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW. Applications should be sent to the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW, not later than 20 July 1978.

Westhill College of Education
SELLY OAK, BIRMINGHAM B29 6LL

**RELIGIOUS AND THEOLOGICAL
STUDIES SECTION**

**Lecturer II or Senior Lecturer
IN
MODERN THEOLOGICAL THOUGHT**

Applications are invited for this post, tenable from 1st January 1979, or earlier if possible, from candidates with an honours degree and research qualifications in Twentieth Century Theological Thought.

The successful candidate will be expected to contribute to the B.Ed. degree course of Birmingham University at both Ordinary and Honours levels.

Westhill is a constituent member of the Selly Oak Colleges in which a wide range of courses in Religious Studies is offered.

Closing date for applications is 28th June 1978.

Please request full particulars and details for application from the Principal as soon as possible since this is the only advertisement.

Salop Social Services
Boreatton Park, Baschurch, Salop SY4 2EY

**Teacher of Motor
Vehicle Maintenance**

required at this community home school providing a therapeutic community approach to treatment, education and training, for 50 boys aged 14 to 18 years, who are subject to care orders.

This teacher must be able to undertake with a small group of boys the practical maintenance of school transport and form part of a team assisting disturbed adolescents to develop stable personalities.

The successful candidate will be required to perform additional duties averaging 15 hours per week.

Salary: If a qualified teacher, a Burnham plus special allowance of £564, plus additional duties allowance of £879. If not a qualified teacher but holding the Full Technological Certificate of City and Guilds, in the range £2,847 to £4,041, according to experience, plus additional duties allowance of £879.

Accommodation: A three-bedroomed house is available in the grounds, if required, at a rental of £204 per annum.

Application forms, further information and informal enquiries to Max Sharman, Principal, at the above address, or telephone Baschurch 551.

The British Council

invites applications for the following posts:

Director of Studies, EFL (Afghanistan)
British Council Centre, Kabul
To teach Afghan adult students, supervise British volunteer teachers and general course administration. Qualified and experienced EFL teachers.
Salary: £4,251-£5,268 p.a.
Benefits: free accommodation; overseas and children's allowances. Two-year contract, renewable. 76 AD 84

**ELT Curriculum and Teaching Materials
Adviser (Nepal)**
Ministry of Education, Kathmandu
Graduate with 5 years' experience of TEO and ability to write ELT materials. TEFL qualification an advantage. Men preferred; UK citizens.
Salary: £4,389-£5,409 p.a.
Benefits: married and children's allowances; free accommodation; medical scheme; UK superannuation. Two-year contract. 76 UE 14

**Senior Lecturer in Contemporary English
Literature (Poland)**
Mick Curie-Skłodowska University, Lublin
Honours degree in English from British university. Postgraduate qualification, preferably doctorate. British university teaching experience.
Salary: £5,001-£6,845 p.a.
Benefits: free accommodation; overseas allowances. One-year contract, renewable. 76 CU 102

Lecturers in EFL (Iran)
Language Centre, University of Azarabadegan, Tabriz
Graduates, preferably with TEFL or similar qualification and TEFL experience. Experience of teaching technical/scientific English desirable.
Salary: £3,600-£4,800 p.a. approx.
Benefits: accommodation allowance; medical scheme. One-year contracts, renewable. 76 HU 93-99

**Lecturers in English Language and
Literature (Qatar)**
Faculty of Education, Doha
a. Lecturers in English Language
b. Lecturer in English Literature
c. Language Laboratory Instructor in English.
Post a and b: candidates must have a higher degree.
Return fares are paid. Local contracts are guaranteed by the British Council.
Please write, briefly stating qualifications and length of appropriate experience, quoting relevant reference number and title of post for further details and an application form to The British Council (Appointments), 63 Davies Street, London W1V 2AA.

**ASSISTANT TEACHER
(RESIDENT)**
(HANDICRAFTS AND GENERAL SUBJECTS)
£2,565-£4,056 Woking

For Kinton Community Home - a large Home with education on the premises, accommodating 80 boys aged 11-18. Situated in 27 acres of grounds with many recreational facilities.

Applicants must be fully qualified and will be required to undertake extraneous duties for which £276 p.a. paid. Salary Burnham Scale 1. Semi-detached house available for £204 p.a.

For informal discussion and/or to view the Home contact Mr K. Nicholson, The Principal, at Woking 65411.

Application form and job description from Social Services, Department (GYR) Surrey House, 34 Street, Kingston upon Thames, Surrey, Tel: 01-848 6111, ext. 276.

DORSET
INSTITUTE OF HIGHER EDUCATION

Appointment of
**DEPUTY
DIRECTOR**

Applications are invited from graduates with substantial experience in the fields of higher and/or further education and who hold or have held posts carrying senior management responsibilities within a college. The salary range is likely to be that appropriate to a Group 9 College (£3,963-£10,369).

This new institution is formed from an amalgamation of the advanced work of the Bournemouth College of Technology with the Weymouth College of Education. The Governors are looking for a person of proven ability, capable of assisting the Director in the total work of the institution and able to assume responsibility for Academic development and course planning.

Application forms and further particulars from the County Education Officer, County Hall, Dorchester, Dorset DT1 1XJ.

Closing date: 5 July 1978.

NOTTINGHAM
THE UNIVERSITY
SCHOOL OF EDUCATION
STUDIES DEPARTMENT

Applications are invited from graduates in Humanities or Sciences for the post of Junior Research Associate. The post will be for two years. The salary scale is £3,174 to £5,174 p.a.

Further particulars may be obtained from the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW. Applications should be sent to the Educational Research Officer, Lancaster University, Bailrigg, Lancaster LA1 4YW, not later than 20 July 1978.

**Salop County
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**Teacher of Motor
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**ELT Curriculum and Teaching Materials
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Graduate with 5 years' experience of TEO and ability to write ELT materials. TEFL qualification an advantage. Men preferred; UK citizens.
Salary: £4,389-£5,409 p.a.
Benefits: married and children's allowances; free accommodation; medical scheme; UK superannuation. Two-year contract. 76 UE 14

**Senior Lecturer in Contemporary English
Literature (Poland)**
Mick Curie-Skłodowska University, Lublin
Honours degree in English from British university. Postgraduate qualification, preferably doctorate. British university teaching experience.
Salary: £5,001-£6,845 p.a.
Benefits: free accommodation; overseas allowances. One-year contract, renewable. 76 CU 102

Lecturers in EFL (Iran)
Language Centre, University of Azarabadegan, Tabriz
Graduates, preferably with TEFL or similar qualification and TEFL experience. Experience of teaching technical/scientific English desirable.
Salary: £3,600-£4,800 p.a. approx.
Benefits: accommodation allowance; medical scheme. One-year contracts, renewable. 76 HU 93-99

**Lecturers in English Language and
Literature (Qatar)**
Faculty of Education, Doha
a. Lecturers in English Language
b. Lecturer in English Literature
c. Language Laboratory Instructor in English.
Post a and b: candidates must have a higher degree.
Return fares are paid. Local contracts are guaranteed by the British Council.
Please write, briefly stating qualifications and length of appropriate experience, quoting relevant reference number and title of post for further details and an application form to The British Council (Appointments), 63 Davies Street, London W1V 2AA.

Teachers of English (Portugal)
Anglo-Portuguese Association, Oporto
Enrolment about 2,100 Portuguese students, aged 16 and above.
Candidates, single only and preferably under 30, should be graduates with relevant teaching experience. A TEFL qualification is desirable.
Salary: £2,592-£3,792 p.a. approx.
Benefits: low local tax (7 per cent 8 per cent); medical scheme. Two-year contracts, renewable 76 80 89-92

Teachers of English (Qatar)
Government Preparatory and Secondary Schools and Language Teaching Institute
Graduates with 3 years' relevant experience. Single men or married teaching couples. Possible participation in OUP-Qatar ELT project for interested teachers.
Salary: £5,000 p.a. tax free (increases under review).
Benefits: free furnished accommodation; free medical service; annual passage-paid leave; terminal gratuity. Three-year contracts, renewable. 76 AS 96-108

AYCLIFFE SCHOOL

**SECOND
DEPUTY**

Applications are invited from suitably qualified and experienced persons for the post of Second Deputy in the Regional Assessment Centre. Aycliffe is the regional assessment and treatment centre for severely disturbed youngsters in the northern quarter of the country.

The Second Deputy will join an executive team responsible for all aspects of the work of the Centre. The post is residential. Married or single accommodation is available at the national rates. Salary scale £5,067 to £6,889 per annum.

Applications giving full details of qualifications and experience and the names of three referees should reach the Principal, Aycliffe School, Copeland, Aycliffe, Co. Durham, not later than 1st July, 1978.

City of Manchester
Education Committee
Deputy Education Officer

Salary Scale £9387 - £10053

Applications are invited for the post of Deputy Education Officer, vacant following the appointment of the present holder to be Director of Education for Sunderland.

The post is second in seniority in Manchester Education Department.

Further particulars and application form from The Director of Administration (O/KB), Town Hall, Manchester, M60 2LA.

Closing date: 30th June, 1976.

HAMPSHIRE

TRAINEE EDUCATION WELFARE OFFICERS

vacancies occur in Hampshire for two trainee Education Welfare Officers who, after a period of in-service training, must be prepared on secondment, to undertake a full-time professional course leading to the Certificate of Qualification in Social Work (C.Q.S.W.).

An Education Welfare Officer in Hampshire provides a link between home and school by understanding and endeavouring to meet the social needs of the family. The Officer also tries to ensure that every child benefits from the available educational opportunities, the duties also including work in connection with school attendances.

Previous experience either full-time or in a voluntary capacity in welfare or social work is an advantage. Applicants must hold a current driving licence and preferably have their own car.

SALARY Non-graduates £1,215-£2,040
Graduates £2,364-£2,853
(Starting pay according to age and academic qualification)

Application forms and further particulars obtainable from the County Personnel Officer, The Castle, Winchester, Hants. SO23 8UG. Closing date for applications 6th July, 1976. Please quote reference 0476/AA.

EDUCATION DEPARTMENT

Deputy Director of Education

£7,485-£8,022

Applications for the above post are invited from graduates with appropriate teaching and administrative experience.

The successful applicant, who will report directly to the Director of Education, will be concerned with the management of the Education Service within a progressive Authority, which currently includes a major Polytechnic, two large Colleges of Further Education, 24 Secondary Schools, 134 Primary Schools, nine Nursery Schools, eight Special Schools, an extensive Careers Advisory Service and a Youth and Community Service. The Deputy Director will be directly responsible for the Senior Inspectors (Primary and Secondary), the Chief Administrative Officer and the Senior and Staffing Sections.

The Borough of Sunderland is the largest metropolitan district within the Metropolitan County of Tyne and Wear and serves an increasing population, currently 295,160. It contains the rapidly expanding new town of Washington, and is served by excellent road and rail links. The region's natural coastal and inland recreational areas together with the varied cultural and leisure amenities within the Metropolitan County combine to make the town a desirable place in which to live and work.

Application forms and further particulars, obtainable from the Director of Education at the address shown below, should be returned within 14 days of the publication of this advertisement.

L. A. Bland, Chief Executive,
Town Hall and Civic Centre, Sunderland
SR2 7UN.

Borough of Sunderland

BOLTON METROPOLITAN BOROUGH

CHIEF EDUCATION WELFARE OFFICER

Salary Scale S01 - £4,239/£4,545

Applications from males/females are invited for this important post within the Education Department. The Chief Education Welfare Officer is responsible for the day-to-day supervision of a team of 16 Education Welfare Officers working in liaison with school, home, education office and social work agencies. School population 50,000. Applicants should have good experience and/or qualifications in the field of educational welfare. Car allowance payable. Scheme for removal expenses, lodging allowance and temporary accommodation available in suitable cases.

Forms and further particulars available from the Personnel Officer, P.O. Box 28, Town Hall, Bolton (Tel. 22311, ext. 587), should be returned by June 28, 1976.

KENT County Council
Education Department

GENERAL INSPECTOR
with Special Responsibility for Science

£7,767-£8,391 (Soulbury Scale)

Applicants should be highly qualified graduates in Science with an emphasis on Biology and be able to lead and develop the academic work in this subject at all levels including the Sixth Form. They should be able to advise on the equipping and layout of Biology laboratories and, through in-service training and conferences, encourage work in all aspects of the subject.

Assistance with removal expenses, etc., in approved cases.

Further particulars and application form, returnable by 2nd July, from W. H. Petty, County Education Officer, (Ref. G.1), Springfield Maidstone.

CITY OF NORWICH
AMENITIES DIVISION

Community Development Officer

★ Senior Team Member, Salary £3,366-£4,095.
★ Responsible for 1. PLAY (Adventure Playgrounds and Playchemes)
2. SPORT
3. COMMUNITY GROUPS.

★ Part of a Comprehensive Leisure/Recreational Department.

Please send a stamped addressed envelope for application form and further details to the Amenities Officer, 15 Chapel Field East, Norwich, NR2 1RN. Application forms should be returned within 10 days of the appearance of this advertisement.

KENT County Council
Education Department

(CAREERS SERVICE)

SPECIALIST CAREERS OFFICERS

£4,239-£4,545 (Two Posts)

For older school leavers and further education students, one for CANTERBURY DIVISION and one for MEDWAY and TUNBRIDGE WELLS DIVISIONS (based at Maidstone). Previous experience in the Careers Service required; degree or other higher education qualifications desirable.

Generous sitting-in allowances in appropriate cases.

Further particulars and application form returnable by July 2 from W. H. Petty, County Education Officer (Ref. CS), Springfield, Maidstone ME14 2LJ.

Kent Area Health Authority

Senior Health Education Officer

Salary Scale 9, £4,008 to £4,887 p.a.
(plus supplementary payment of £312 p.a.)
Delegated Responsibility for Maidstone and Medway Health Districts

Candidates will probably come from an educational or social service related field. Emphasis will be on the formation of positive attitudes and behaviour before untidily behaviour is well established. The applicant must therefore be competent to advise on education and socialization for health.

Essential requirements for this post are at least 3 years' health education experience or other relevant work at senior level.

Applicants who have good potential but lack the necessary experience for the senior post may be considered for the post of Health Education Officer. They will be required to take further training with view to possible promotion at a later date. The salary for Health Education Officer is Scale 4, £3,534 to £4,344 (plus supplementary payment of £312 p.a.). The successful applicant will be based at Medway Hospital.

Job description and application forms available from the Personnel Manager, Kent Area Health Authority, Preston Hall Hospital, Maidstone, Kent ME20 7HS. Telephone Maidstone 78281, ext. 35.

Closing date for completed applications Monday, July 5, 1976.

CAREERS SERVICE

SENIOR SPECIALIST CAREERS ADVISER
(Disadvantaged Young People)
SALARY: £3,825-£4,545-AP5/501

SENIOR CAREERS ADVISER
City Careers Centre
SALARY: £3,825-£4,095-AP5

Applicants for these two posts should be qualified and experienced career advisers with an interest in work with either disadvantaged young people including the unemployed or as second in command of a team.

CAREERS ADVISERS
SALARY: £2,822-£3,702-AP3/4

Applicants should hold or expect to obtain a professional diploma in the Careers Service and have other appropriate qualifications and experience.

Applicants with substantial successful individual, commercial experience or career officers seeking wider experience will be considered for this special post with unemployed young people. The initial appointment will be until March 1977.

Application forms and further information from the Chief Education Officer, Administration Division, Margaret Street, Birmingham B3 3UU.

CLOSING DATE: 2nd July 1976.

BIRMINGHAM

London Borough of Enfield

YOUTH OFFICER

(a) Applications are invited from suitably qualified men and women for the above post.

The salary will be on Soulbury Points 10 to 14, £3,957 to £4,545 per annum plus £267 London Weighting.

One hundred per cent removal expenses up to a maximum of £400, generous assistance towards relocation costs, temporary housing accommodation for up to two years, £10 per week lodging allowance (up to four months) in certain cases.

Trainee Careers Officer

£1,215 to £2,528 plus London Weighting.

(b) Applicants should be aged 22 or over, be grade 10 or hold other relevant qualifications, and to have had at least one year's experience in suitable employment in industry, commerce, teaching, administration or social work. After a period of practical training the trainee will be seconded for a year's full-time course to the Diploma in Careers Guidance.

The starting salary of a graduate aged 22 would be not less than £2,127 plus £281 London Weighting. Application forms are available from the Chief Education Officer, P.O. Box 56, Civic Centre, Enfield EN1 3XQ, and should be returned within 14 days of the appearance of this advertisement. Please quote Ref. OGD/888.

West County Council
Education Department

Applications are invited from suitably qualified persons, with appropriate teaching experience, for the following post in the Authority's Advisory Service for September, 1976, or as soon as possible thereafter.

Senior Adviser
For Secondary Schools/Colleges

Salary, Group 10 Head Teachers Scale. Salary Range, £7,455 to £8,079, plus £312 supplement in accordance with the Burnham 1978 Salary Agreement. (Post Ref. OD/26.10.76.)

This post has become vacant due to the present incumbent taking up a senior appointment with the Authority's new Institute of Higher Education.

Application forms and further details are available on receipt of a stamped addressed envelope enclosing a recent photograph of the undersigned, to whom they should be returned not later than July 2, 1976.

John Boyle, Director of Education,
Education Department, Princess House, Princess Way, Southsea.

ilea INNER LONDON EDUCATION AUTHORITY

Applications are invited for the following posts:

Staff Inspector of Music

Salary range: £8,774-£10,027 (inclusive of London Weighting) with possible progress to £10,907.

Inspector of Music

(Basic grade) Salary range: £7,448-£8,149 (inclusive of London Weighting).

The Staff Inspector advises on all aspects of musical education in the ILEA, administers the Authority's instrumental scheme, and looks after the Authority's instrumental teachers and instrumental ensembles. The London Schools Symphony Orchestra and the Centre for Young Musicians are under his general direction. Applicants should be musicians of high ability with teaching and administrative experience.

The Inspector of Music (Basic grade) advises on and inspects music in schools and colleges and organises and conducts in-service courses.

Previous applicants for the post of Staff Inspector of Music may apply for their applications to be reconsidered for either or both of these posts. New applicants may ask to be considered for either.

Details and application forms from the Librarian Officer (H.D. Smith) 217, Aldington Street, London, E1 7PH. Forms to be returned by 5 July 1976.

Peterborough, ancient cathedral city and modern town is being more than doubled in size under the New Towns Act. An adventure playground is to be opened early in 1977 in Bretton, the first of four new townships being built under the development programme, and we need to appoint a

SENIOR ADVENTURE PLAYGROUND LEADER

1962-£3,282

From September, 1976, for a period of two years. The successful candidate will be responsible for the design and management of the playground and will be part of a team of community work staff who are already working in the township under the direction of the Development Corporation's Social Development Officer.

Applicants, male or female, should be trained and experienced in playground leadership. Starting salary within the scale will depend on qualifications and experience.

Conditions of service provide for generous assistance towards the cost of moving house with temporary housing allowance, subsistence allowance at a realistic rate and life insurance, in appropriate cases. A house to rent will be available if needed.

Application form (returnable by 5 July, 1976) from General Manager, Peterborough Development Corporation, PO Box 3, Touthill Close, City Road, Peterborough PE1 1UJ, or ring 0733-88931 Extension 501.

Greater Peterborough

EDUCATION DEPARTMENT
GRIMSBY DIVISION

General Adviser

Burnham Head Teacher Group 10
(Points 0-4)

Salary: £7,455-£8,079 + £312 p.a.
Post Ref. HQA.21

The person appointed to this post will require a specialist knowledge of Physical Education and outdoor pursuits for boys. General duties will be restricted to the Grimsby Division, and specialist Physical Education duties will cover South Humberside school.

Application forms and further details are available from: Director of Education (C/S-Staffing), County Hall, Beverley, North Humberside HU17 9BA. Applications to be received by 2nd July, 1976.

Humberside County Council

Trainee Careers Officers (2)

AR2 £2,790-£3,114 + £312 p.a.

If you have gained entry for September 1976, or are in the process of applying for a place commencing in January 1977, on a one year course leading to the Diploma in Vocational Guidance, then you are eligible to be considered for appointment as a Trainee Careers Officer. Offering on the job experience, the appointments are subject to one year's secondment and an undertaking to return to Hillingdon for at least two years' post-qualification employment. Mature candidates with at least three years' work experience preferred.

Application forms available from Personnel Officer, Belmont House, 38 Market Square, Uxbridge, Middlesex UB8 1TR. Telephone Uxbridge 52281, extension 29, quoting reference E/26/36.

Closing date: 2nd July, 1976.

LONDON BOROUGH OF HILLINGDON

CYNGOR SIR GWYNEDD COUNTY COUNCIL

Adran Addysg

DIRPRWY GYFARWYDDWR ADDYSG

£8,142-£8,500

Rhaidd i ymgyswyr fod yn raddadigion gyda phrofiad gweinyddol addas a phrofiad o ddygu.

Cymorth ariannol i'w gael ar gostau symid a chostau eraill a i'w llywodraeth mewn achosion teulung. Llywodraeth a chyllusterau cymorth i brynu.

Fluriant cais gan Swyddog Personol y Sir, Swyddia'r Sir, Caernarfon.

Dyddiad cau: Gorffennaf 2.

Education

assistant director of education

Higher Education
£6,225 to £6,908

Applicants for this Fourth Tier post should be graduates (male or female) with teaching experience. Previous administrative experience with a local authority would be an advantage. The responsibilities of the post will include the administration of some 8,500 student awards in both further and higher education, and there will be involvement in the work of higher education and the Careers Service within colleges. Generous assistance will be given with the expenses incurred in moving house in accordance with the Authority's scheme.

Application forms and further details are available from the Director of Education (ADM/4) at County Hall. Closing date July 2, 1976. Please quote reference 145.

Nottinghamshire County Council

Leicestershire
(Re-advertisement)

Principal Senior Music Adviser

£7,767-£8,391

This senior and co-ordinating advisory post in a county internationally famous for its strong musical traditions, School of Music and developing choral work, requires a person with ideas, imagination and vigour. He/she will be expected to spread and develop by every possible means, music making in all educational establishments and wherever else help is asked for within the County. Further particulars on receipt of a.s.a. Previous applicants need not re-apply and will be considered automatically.

Applications (no forms) giving details of compositions, qualifications, teaching and practical experience, especially in orchestral and choral work, with the names of two referees and one testimonial to Director of Education, County Hall, Glenfield, Leicester, LE3 8RF, by 8th July.

Redbridge
London Borough

Senior Education Officer ED4 (Further Education)

P.O.2/3 £7,479 to £8,154 (Inclusive)

Commencing salary according to qualifications and experience.

This key post is vacant due to promotion. Applications are invited from good honours graduates with varied teaching experience and substantial local Education Authority administrative experience. The successful candidate will be directly responsible to the Chief Education Officer for the Authority's Further Education Youth and Community and Careers Services.

Generous assistance with removal, separation and resettlement expenses in approved cases. Essential user car allowance and assisted car purchase scheme. Local Authority housing may be available on temporary basis if required.

Application forms and further particulars from John Fordham, Chief Education Officer, Education Office, 255-259, High Road, Ilford, Essex IG1 1NN returnable by Monday, July 5, 1976.

ADMINISTRATIVE ASSISTANTS

Applications are invited for three newly created posts for ADMINISTRATIVE ASSISTANTS at the Board's offices at Aldershot, Hampshire. The posts are each concerned with the educational aspects and the administration of the Board's examinations in a group of subjects. The persons appointed will be required to assist the Administrative Officers responsible for one of each of the following groups: (i) foreign languages and social sciences, (ii) physical sciences and biological sciences and (iii) mathematics and technical subjects.

Applicants should specify for which of these three posts they are making application.

Applicants for each post should possess a good knowledge of one or more of the subjects in the appropriate field at least to GCE Advanced Level standard and should have had appropriate administrative experience in the educational sector. A university degree and/or some teaching experience while not essential would be desirable. Though the posts are mainly concerned with administration and organisation, they include also some important educational aspects. The experience of applicants should therefore demonstrate a close involvement and interest in the relevant subjects.

The appointments will be on the Board's scale for Administrative Assistants, which is £2,830 + £136 to £3,582 (bar) + £136 to £4,262. This scale is aligned in specified points with points 1, 3 and 5 of the Association of University Teachers' scale. The starting point on the scale will depend on the age, qualifications and experience of the successful applicants, and promotion above the bar will normally be open only to graduates or to those with extensive proven expertise and experience.

Further details of the posts, together with an application form, can be obtained from the Personnel & Services Manager.

THE ASSOCIATED EXAMINING BOARD
Wellington House, Station Road, Aldershot, Hampshire GU11 1BQ

To whom completed forms of application should be returned, not later than Friday, 2nd July, 1976. It is hoped to interview applicants shortly after this date, and when completing the application form all applicants should state clearly the earliest date on which they could take up the appointment.

